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**Crowdfunding – an alternative financing for German
start-up enterprises?**

Thesis

Spring 2016

Seamk School of Business and Culture

International Business

Corporate Management



SEINÄJOKI UNIVERSITY OF APPLIED SCIENCES

Thesis abstract

Faculty: Seamk School of Business and Culture
Degree programme: International Business
Specialisation: Corporate Management

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Title of thesis: Crowdfunding – an alternative financing for German start-up enterprises?

Supervisor: Erkki Kytönen

Year: 2016 Number of pages: 60 Number of appendices: 6

Creation of young and innovational ventures is becoming more and more attractive for potential business founders, due to beneficial political and economic frame conditions. Nevertheless, the issue of funding the project is concerning most of entrepreneurs: Because relatively weak own financial backings seldom suffice until profitability stage, founders are depending on external financial support in order to cover an arising equity gap. Here, established traditional forms of financing can often hardly be taken into consideration, because a business start-up's risky nature is discouraging potential investors. For a couple of years, Crowdfunding is extending the range of offer in terms of start-up financing. If this type of financing has potential to ease the challenge of equity gap closing and to be established as serious financing alternative, was examined in this thesis.

For this purpose, a theoretical basis was developed by aid of literature sources, studies and online material: Five main traditional financing possibilities were presented at the beginning and examined regarding early stage financing. Afterwards, Crowdfunding's main benefits in comparison to previous financing types were highlighted, but also negative aspects shown, represented by Principal-Agent problems. Furthermore, legal framework of Crowdfunding was studied.

By aid of surveys with start-up enterprises and an interview, conducted with a founder from the FinTech industry, theoretical assumptions were proven in practice. Here, method of analysis was created symmetrically. Aim was to get answers to the defined research questions from the introduction part of the thesis.

It turned out that Crowdfunding appears attractive for a specific industry and may also have advantages apart from its pure role of financing. Generally, it represents a niche financing product and is mainly characterized through capital support.

Keywords: Crowdfunding, Equity-based Crowdfunding, Equity gap, Principal-Agent Theory, Securities prospectus requirement, Start-up financing

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Abbreviations

BaFin	Bundesanstalt für Finanzdienstleistungsaufsicht (Federal Institution for Surveillance of Financial Services).
BAND	Business Angels Netzwerk Deutschland e.V. (Business Angels Network Germany).
BMWi	Bundesministerium für Wirtschaft und Energie (German Federal Ministry of Economics and Technology).
CEO	Chief Executive Officer.
COO	Chief Operating Officer.
CTO	Chief Technology Officer.
ERP	European Reconstruction Program (source of financial support from KfW institution).
EUR	Euro (currency).
FinTech	Financial Technology Start-up.
HGB	Handelsgesetzbuch (German Commercial Code).
KfW	Kreditanstalt für Wiederaufbau (Financial Institution for Reconstruction).
Ph.D.	Doctor of Philosophy.
VermAnlG	Vermögensanlagegesetz (German Investment Law).

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1 INTRODUCTION

1.1 Background

In 2014, 915.000 persons started a freelance work in Germany, which is an increasing number according the “KfW Gründungsmonitor” (2015, 3). Hahn (2014, 3) states that for prospective graduates founding new ventures nowadays depicts an attractive alternative, while starting careers in global enterprises was a decisive factor of motivation in the past. Apart from contributing to the overall society’s welfare and ensuring innovation in Germany for the long term, an individual fulfilment and development of the own personality are essential motives: Developing an own business is granting a maximum level of self-realization and self-satisfaction to their founders and they are in the position to personally achieve more compared to an ordinary career in a conventional enterprise. In addition, favorable framing conditions can support a decision regarding independence: Especially business ideas based on the internet can nowadays be established quite uncomplicated and do often need just a small team of founders and no extra production facilities (Hahn. 2014, 3). Sponsored by public funding possibilities that are granted by the German government and belonging credit institutes, business start-ups are becoming more and more attractive. Here, potential risks and general challenges connected to a business start-up seem to decreasingly discourage potential founders, as especially risk of failure and possible insolvency is extremely high for new ventures, because the business has not proven its ability to compete in the market yet. Furthermore, start-ups are also becoming real alternatives on the labor market, due to low hierarchies and uncomplicated ways of decision-making, which is fostering younger generation’s demands.

“Thinking out of the box” is not just a theoretical paradigm anymore, but is happening in the moment thanks to Generation Y that is taking business start-ups as an alternative to a conventional career into consideration. The information given implies that there is happening an entrepreneurship boom in Germany over the last years, while particularly Berlin, but also Munich and Hamburg turned out to be important places of foundation (see figure one). The German Start-up Monitor 2015 reveals that most companies analyzed have their headquarters in these cities.

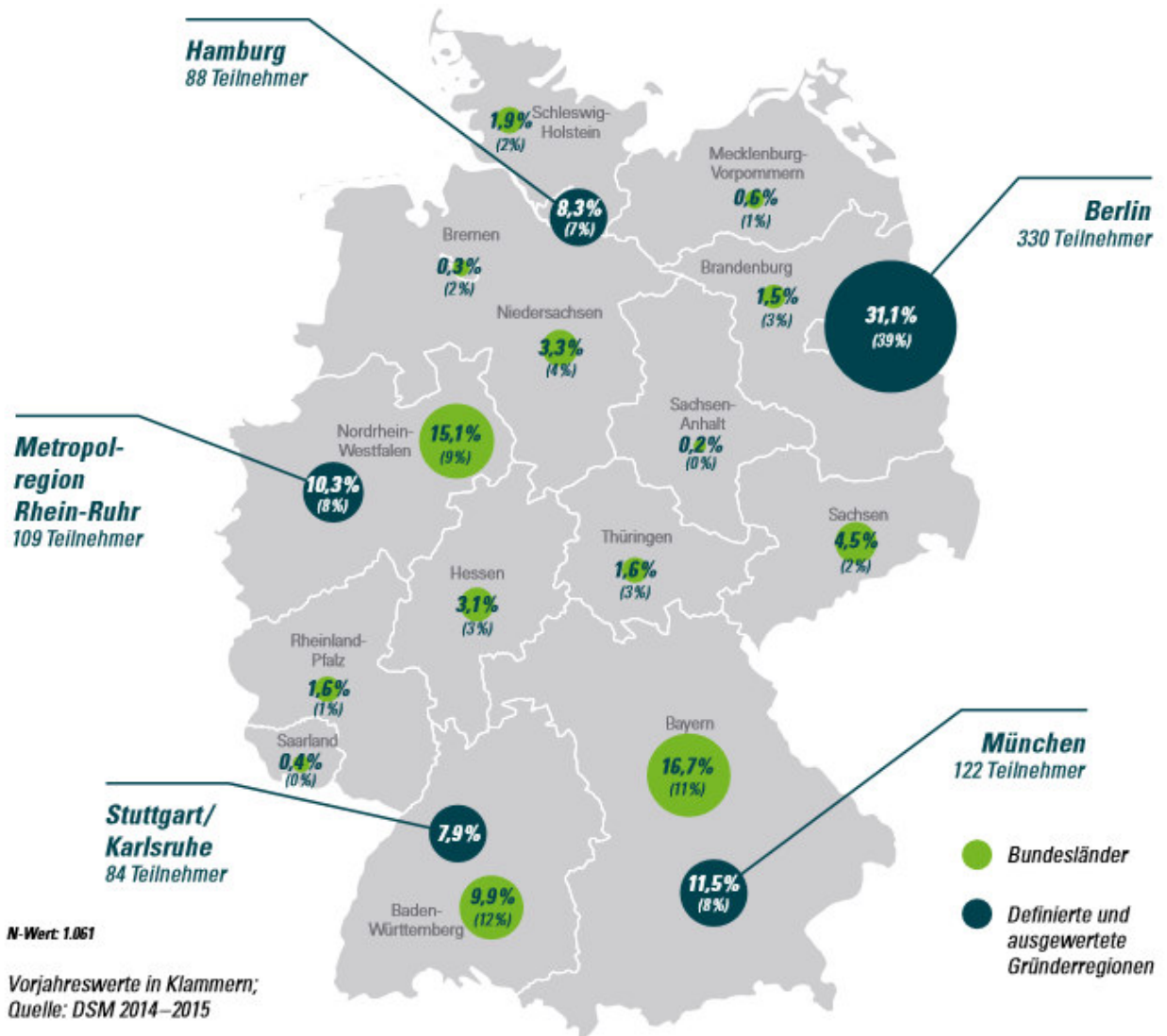


FIGURE 1. Headquarters of German start-ups per federal states and cities (2015).
(Based on German Start-up Monitor 2015.
http://deutscherstartupmonitor.de/fileadmin/dsm/dsm-15/studie_dsm_2015.pdf.
Page 15.)

Approximately 1.000 start-up companies have been analyzed for the German Start-up Monitor 2015. In this graphic, the percentages of start-ups having their headquarters in the corresponding city or region are illustrated. Here, the green percentage indicates the number of start-ups within a whole federal state, while the blue one describes one particular city. Values in brackets are representing percentages of the preceding year (2014). It can be detected that apart from Munich and Hamburg also Rhein-Ruhr region recorded a significant growth compared to 2014. Nevertheless, Berlin is still main location for German start-ups.

In the meantime and parallel to the start-up boom, a new form of financing arose on the market, which has its origin in the United States: Crowdfunding including further concepts like Crowdinvesting. In Germany, Crowdfunding initially reached great notice in 2011, when the movie of “Stromberg” was funded. Because the corresponding TV series already had a huge number of viewers and was therefore quite popular at point of announcement that a movie is planned to be developed, the funding process itself was successfully closed within one week. Here, the funding volume of 1.000.000 EUR was covered by 20.000 shares valued with 50 EUR each, while one single investor could hold twenty shares at maximum (Homepage Startnext). Not only the TV series’ popularity, but also the kind of reward offered by the initiating team was attracting the mass: per ticket sold in the cinema, an investor was given 1 EUR in return for the first 1.000.000 viewers. From the 1.000.001 viewer onwards, the investor was paid out 50 Cents. Given the fact that 1.320.221 people came into cinemas to watch the movie until February 2014, Crowdinvestors generated a profit of approximately 16% in total or 5.3% per year. Apart from a monetary reward, the investors were given a certificate as well as naming in the end credits of the movie (Homepage Startnext). Because of a positive funding process and a general hype connected to the movie, the area of Crowdfunding reached a breakthrough in Germany at that time. In 2015, Crowdfunding and corresponding forms of financing already supported projects by more than 114 million EUR, which is still an increasing trend (study from German foundation organization. 2015, 1).

1.2 Purpose and structure of this thesis

One of Crowdfunding’s belonging forms of financing is Crowdinvesting, which will be explained in detail in chapter 3.1. However, since Crowdinvesting is mainly characterized through a financing of young start-up companies (Baumann et al. 2014, 9) it benefits from the overall entrepreneurial boom in Germany. Moreover, it could deliver an answer to a challenge, most of start-up enterprises face in the early stage of the company’s development according to Beck et al. (2014, 53): An equity gap, arising from a lack of access to traditional means of financing like bank

loans and Venture Capital combined with relatively weak own financial resources. The equity gap can hardly be covered by external means of financing, because particularly in the early stages, a company has not proven its profitability yet, which is a basic requirement of many investors. Consequently, Crowdfunding expands the offer of financing possibilities for start-up enterprises, which leads to the main research question of this thesis: *Does Crowdfunding depict an alternative source of financing for German start-up companies compared to traditional financing possibilities? What makes Crowdfunding attractive? Furthermore, does Crowdfunding have the potential to overcome the issue of equity gap within early stages of an enterprise's development more easily?*

To answer these questions, five main traditional financing possibilities will be portrayed in the first theoretical chapter: Bootstrapping, Business Angels, Venture Capital, Bank Loans and Public Funding. Based on their advantages and disadvantages regarding start-up financing, Crowdfunding will be evaluated as an alternative starting from the second theoretical chapter. In the beginning, the idea of Crowdfunding and its relation with the broader concept of Crowdsourcing will be explained. In the following, the German market of Crowdfunding will be analyzed, based on a recent study from the German foundation organization and also the process of financing itself will be highlighted in detail. Afterwards, possible problem constellations in the relation of start-up, platform provider and investor will be explained based on a preceding analysis of Kortleben and Vollmar (2012), before the legal framework of Crowdfunding in Germany will be described. In the end of the second theoretical chapter, three main theories, why Crowdfunding could depict an alternative for start-ups, will be outlined. As following step, the empirical part will prove the theories and also other characteristics of Crowdfunding influencing the attractiveness for German start-up enterprises. Basically, the empirical part will cover main findings from the preceding theoretical chapter in order to prove practicability. To do so, a survey is going to be conducted with German start-up enterprises as well as an interview with the founder of a FinTech start-up. Afterwards, key findings from the empirical part will be presented, before the conclusions part will close the analysis. Overall objective of this thesis is to ensure a problem-oriented analysis of Crowdfunding's potential for start-up enterprises and to de-

live further findings in the young area of Crowdfunding by following the above defined research questions.

1.3 Earlier studies

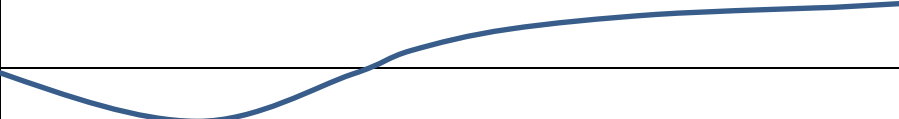


Due to its innovational character, not much literature about Crowdfunding does exist by now in general. In addition, the connection of start-up foundation with Crowdfunding was not examined in detail until today, although some sources do exist. Here, many authors describe basic challenges connected to business start-ups, which gives an informative introduction to the overall topic, but cannot be used to work on the research questions. Nevertheless, Beck (2014) and Hahn (2014) have been proved to be profound sources, as they go beyond the basic framework of business start-ups and also concentrate on Crowdfunding's position within financing possibilities for start-up enterprises. Also Schramm and Carstens (2014) are dealing with Crowdfunding's ability to raise start-up capital. Complemented by studies from Kortleben and Vollmar (2012) and Hagedorn and Pinkwart (2013) a basis for this analysis can be developed. For the description part of Crowdfunding and Crowdfunding at the beginning of chapter three, Schwienbacher and Larralde (2010) as well as Belleflamme/ Lambert/ Schwienbacher (2013) have been proved to be well-known and evident sources. To give very recent information on Crowdfunding, such as market data, solely online material can be used, including surveys and monitors. Here, KfW as well as German foundation organization turned out to be reliable.

2 TRADITIONAL FINANCING POSSIBILITIES

Basically, start-up entrepreneurs face different opportunities to finance their ideas. With regard to realization of their plan to establish a profitable company, each of these financing methods has its advantages as well as disadvantages. In the following table, five main financing possibilities are illustrated in relation to each phase of a fictive start-up enterprise. Afterwards, these possibilities are explained in the corresponding chapter.

TABLE 1. Simplified illustration: Financing phases of a fictive start-up enterprise, liquidity and sources of financing.

(Based on Beck, R. 2014. Crowdfunding. Die Investition der Vielen. Page 52.)

Financing Phase	Early Stage		Expansion Stage	Late Stage	
	Seed	Start-up		Bridge	Buy out
Phase of the Business	<ul style="list-style-type: none">•Preparation•Choice of legal form•R&D	<ul style="list-style-type: none">•Foundation•Beginning of the Business	<ul style="list-style-type: none">•Penetration of the market•Opening up of new markets	<ul style="list-style-type: none">•Preparation of possible selling, e.g. Initial Public Offering (IPO)	<ul style="list-style-type: none">•Exit of (old) shareholders
Profit					
Loss					
Liquidity	very low	low	increasing /high	high	
Need of capital	low/ moderate	moderate	high	high	
Sources of financing	Bootstrapping Public Funding				
		Business Angel			
			Venture Capital		
				Bank Loan	

2.1 Bootstrapping

Bootstrapping is a form of internal equity-financing and includes use of own savings of the founder as well as financial support of friends and family. This form of financing is rather used in the seed stage than in the start – up stage of a young company (Beck. 2014, 52). Nevertheless, these kinds of financial means can sometimes support the business till later stages, when it turns into profitability and positive cash-flows. In this case, the founder would take advantage of staying in-

dependent, because of renouncing any external investment and also preventing his business from additional costs in case of a bank loan. Plus, it will put him in the position of being able to entirely concentrate on the development of the business idea and focus on essential parts of the business. In contrast, another type of financing would call for much more time that has to be spent on searching an investor or another source of financing (see following chapters). However, according to a survey from the German Start-up Monitor, 18.7% of German start-up companies financed their business only and solely through Bootstrapping in 2015 (German Start-up Monitor 2015, 44). This number implies that in most cases Bootstrapping is often just able to cover the expenses of the very beginning, for instance parts of research and development or bureaucratic issues, such as registration in the trade register, and not the essential business until profitability-stages. Of course, this depends on the individual financial possibilities of the founder and the need of capital of the business. Generally, a founder who financed his start-up enterprise only through Bootstrapping has more or less total control of the company, but, on the other hand, full responsibility at the same time, which signifies a higher risk and according to Hahn (2014, 44) higher psychological strain, too. In addition, room for action is noticeably limited due to relatively weak financial resources, compared to other types of financing, and the business has quickly to begin its operations in order to maintain independence. Connected to this, Bootstrapping also calls for a quick achievement of positive cash-flows; otherwise the business would simply run out of money and consequently lose its liquidity. Taking this information into consideration, Bootstrapping can be seen as a financing basis, which is especially used in the starting phase of a firm, but which has to be completed by other financing methods. Possible complements will be described in the following chapters.

2.2 Business Angel

Compared to Bootstrapping, raising capital on the basis of a Business Angel primarily describes a form of external equity-financing. Other forms of financing are also possible, but this is depending on the specific type of investment, which will

be explained later. In order to enable a general view on Business Angels, only external equity-financing will be examined in the following.

Business Angels are private persons, who are investing their own capital in the company. Consequently, these persons are personally interested in a successful performance of this firm. Often, this participation is more than just financial support. It is rather done because of the own personal interest of the Business Angel and his feeling of being part of something where he could reach individual fulfillment. Hahn (2014, 46) and Beck (2014, 52) state that Business Angels are usually investing within the early stage, but can accompany the firm till expansion stages. Business Angels do have a much higher financial influence on the business than Bootstrapping, because in most cases these are wealthy persons, who are familiar with business-specific processes and the task to manage a firm successfully. Hence, a participation of a Business Angel is not only characterized through financial support, but rather through an additional supply of business-specific know-how. Primarily, these sorts of know-how are relationships and contacts. For example, clients and potential business partners are accompanying the Business Angel from the point of investment on. This kind of intangible capital is especially of high significance concerning a profitable beginning of the start-up, but can also lead to further investments in later stages, as the Business Angel may have investor contacts available. As a reward, the founder is granting shares on the start-up as well as a financial participation on profits, which means an annual interest based on the performance of the corresponding year. Furthermore, the Business Angel is in the position of profiting on an increase of the business value, too. For instance, when selling the shares in a future time, they could have a higher value compared to the date of entering the business. In this case the Business Angel will benefit from participation on an increase of the business value, but, likewise, his shares could of course have a lower value. This depends on the performance of the company in the long-run. Therefore, an analysis of potential firms to invest and a systematic choice is of highest importance from a Business Angel's perspective in order to reach a profitable investment.

In case a founder does not have connections with Business Angels available, he can get in contact with a high number of potential investors via an online platform

of the Business Angels Network Germany (original term: “Business Angels Netzwerk Deutschland e.V.”, BAND). Here, business founders have the opportunity to fill in a so-called “One Pager”, where he has to describe the idea and industry of the business as well as the market, including clients, competitors and partners. For a detailed description of the “One Pager” please have a look at appendix number one. After completing this form, the BAND is examining and then transferring each application to its branches and also to associated members, such as Crowdfunding platforms or other sources of financing (Homepage Business Angels Netzwerk Deutschland e.V.). Thus, the BAND enables a financing for every start-up company, as long as the “One Pager” is filled in plausible and the business idea raises attention for investors.

As already mentioned in the beginning, Business Angels are predominantly representing external equity-financing. But there are also other types of financing, which depend on the particular type of participation and which is regulated in the corresponding German law. In the following figure, different forms of participation are illustrated in comparison to the type of financing:

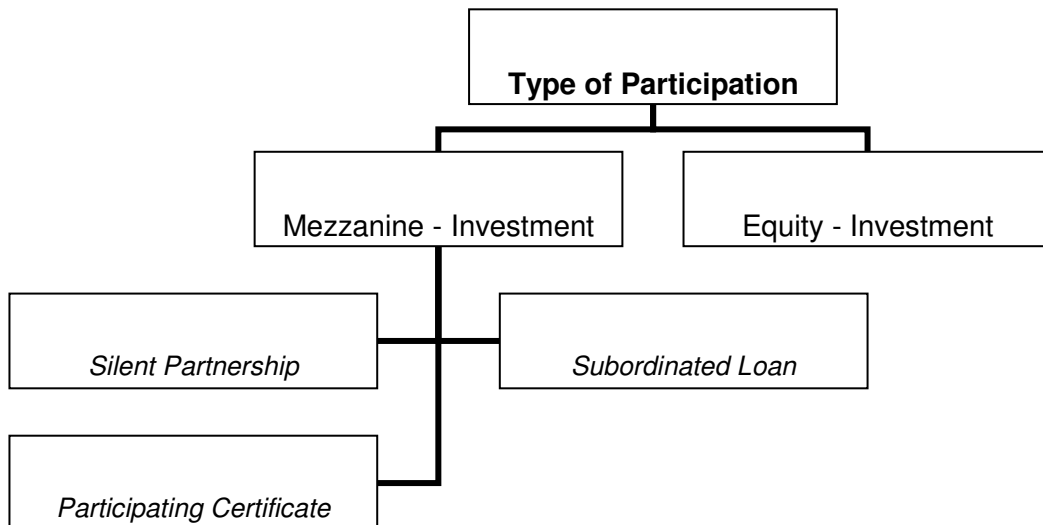


FIGURE 2. Types of participation of a Business Angel.
(Based on Hahn, C. 2014. Finanzierung und Besteuerung von Start-up-Unternehmen. Page 47.)

Taking first a closer look again at external equity financing, we have to assume that a Business Angel has to be seen as co-entrepreneur, who is equipped with rights of co-determination and monitoring. The extent of these rights is depending on the size of investment and thus number of shares he is receiving. Consequent-

ly, the dimension of participation has to be well-reflected and also negotiated with the Business Angel before investment. Here, the quality and degree of the investor's business know-how and contacts has to be taken into consideration, too. In this type of participation the investor has full responsibility for loss of the company.

Before explaining the following types of financing, we first have to commit ourselves to the term Mezzanine – financing. Mezzanine describes an intermediate form of debt- and equity-financing. Main advantage of this kind of financing is to combine advantages of both, debt- and equity-financing. Practically, this means that a company is able to strengthen its equity, but without guaranteeing monitoring rights and shares on the business for the investor. As a consequence, Mezzanine is not able to replace neither debt- nor equity-financing, but rather depicts an interesting and alternative form of financing in the early stage of a start-up company, when equity is needed. Concerning Mezzanine – investment there are three different types. One of them is silent partnership, which is regulated in §230 of the German Commercial Code (“Handelsgesetzbuch”, HGB). According the HGB, a Business Angel will not represent the firm towards outstanding persons. Plus, he will only be liable for loss of the business in the size of his investment (§232 II 1 HGB) and is therefore characterized through a restricted liability. Nevertheless, a silent partner will participate in profits (§231 II HGB). This type of investment is especially of interest for entrepreneurs, who do not want to lose sovereignty on their business, but guarantee a financing at the same time. A subordinated loan depicts another type of Mezzanine – financing. Here, the right of the Business Angel to repayment of the loan will be subordinated in case of insolvency of the start-up. Practically, this implies an initial settlement of other creditor's claims, before repaying the loan of the investor. Usually, founders have to pay an extra charge during acquisition for this risk of the Business Angel. Although a subordinated loan's purpose of financing may be similar to a traditional bank-loan and may thus have attributes similar to debt-financing, the capital invested has actually a comparable character with equity-capital, because of its form of liability (Mezzanine traits). Participating Certificates, also called Coupons, offer rights on assets, especially participation on profit and loss as well as an interest yield. As a reward, the Business Angel has to contribute consultancy of the founders and business-

specific know-how or funding. Compared to a silent partnership, the relation of the start-up entrepreneur and the owner of the participating certificate is just based in personam and not under company law: The investor is neither getting shares nor another kind of shareholder-related benefits and is just lending money for a certain time frame.

2.3 Venture Capital

Also, Venture Capital signifies a form of external equity-financing, but in contrast to Business Angels, it is characterized through a use of foreign capital. Here, so-called Venture Capital Corporations are normally investing high amounts of money in the company and are obtaining shares and rights of co determination in return. Generally, these rights of co determination do have a much broader influence on the business: Venture Capital firms are aiming to decide a firm's strategy and to make decisions on profitability in the long run. Consequently, Venture Capital firms are investing for a longer period than a Business Angel, too. According to Hahn (2014, 57) an average investment lasts five to eight years. Basically, the investment starts in the expansion stage of a company and can sometimes last till late stages. A Venture Capital Corporations' aim is trying to maximize profits of the business in order to obtain highest returns on investment when selling the shares in a future time. "These kinds of expectations are often about 20 – 40% per year" (translated from Hahn. 2014, 59). This can sometimes be a disadvantage from a founder's perspective and lead to controversy with the investor, because a healthy development cannot be guaranteed anymore, as the business is forced to generate cash-flows and high profit margins from the beginning on. Whereas main advantage of a Venture Capital's big financial support is realizing the development of the business idea and financing its growth. As shown in table number one, the need of capital in expansion stages is especially high, which can predominantly be covered by Venture Capital. Since founders of the start-up are not obligated by law to give an interest and to repay the investment at the end of the period, Venture Capital investors are directly bearing an entrepreneurial risk. Therefore, such a financing may lead to high profits, but also to big losses from the investor's per-

spective, and that is why Venture Capital is also called Risk Capital (Hahn. 2014, 58).

Venture Capital corporations are somehow playing the role of an intermediary between the start-up and private persons, also called investors: Normally, corporations are making their investments on the basis of foreign, from (institutional) investors collected money, which is administered in funds. Nevertheless, there are not existing concrete rights of co determination for these private or institutional persons (Hahn. 2014, 58). They are rather investing their money in a fund and are expecting certain return and interest yield, but do not know in what kind of business the Venture Capital Corporation will invest. Logically, Venture Capital Corporations have bigger financial means available and do have a bigger influence on the start-up compared to a Business Angel, since their capital is consisting of a high amount of people. For a more detailed comparison of Venture Capital and Business Angels, please have a look at appendix number two.

Since Venture Capital often is connected to the term of Private Equity, a short definition and separation of both terms will be given at this point. A lot of literature is dealing with Private Equity and its characteristics compared to Venture Capital and views on these terms are differing. Representing the overall view, a short explanation of Private Equity will be made in the following based on Schefczyk, Schneck and Röper. Röper (2004, 23) states that there is existing an European and an Anglo-American definition of Private Equity and both are differing from each other: Whereas the Anglo-American approach describes Private Equity as a generic term of Venture Capital and corresponding forms of financing, the European definition builds a contrast between Private Equity and Venture Capital. Here, Private Equity is characterized through higher volumes of financing and an application during later stages within the lifecycle of a company compared to Venture Capital (Schefczyk. 2006, 1+8). In addition to Röper's definition of the Anglo-American point of view, Schneck (2006, 253) is giving a more general description of Private Equity as being "a generic term to all forms of generating off-market equity" (translated from Schneck. 2006, 253). Consequently, Private Equity can be seen as opposite to Public Equity, where shares are traded by means of a stock exchange. Having many authors describing the differences between Private Equity and Ven-

ture Capital, results are the following: Mainly comparable with Venture Capital, Private Equity depicts another way of external equity-financing. In the first instance, there is no precise separation between these two terms: Like Venture Capital, Private Equity is also characterized through a financing of the company's growth and its main purpose is to maximize a company's profit. Since the investor is aiming to sell his shares in a future time with a profit margin, as high as possible, a Private Equity investor will practice high pressure on the management in order to quickly generate positive cash-flows. Main difference compared to Venture Capital is that Private Equity's point of investment is later than Venture Capital: Beginning earliest in expansion stages, Private Equity participations can last until late stages of the business, whereas Venture Capital Corporations sometimes already invest during the start-up phase within early stages (Hahn. 2014, 61). Plus, Private Equity is characterized through a relative small amount of investors, whereas Venture Capital corporations are endowed with a huge investor basis. Taking Hahn's information into consideration and applying the European approach on Private Equity being separated from Venture Capital, the surfaces shaded in table number one can be explained.

2.4 Bank Loan

Moving away from equity-financing, funding a business with the aid of a bank loan depicts a traditional form of debt-financing. Basically, a financial institution is granting a certain amount of capital and is getting collateral from the start-up's founder in return. Here, the financial institution is not obtaining shares on the start-up, but is receiving a constant interest yield. Length of repayment and level of the interest yield has to be negotiated in advance. Main advantage from a founder's point of view is the ability to stay independent, since there is no other stakeholder, who wants to influence the start-up's strategy and management like an investor, when practicing equity-financing (see chapters 2.2 and 2.3). But obtaining a loan from any financial institution during the early stage of the business will be quite difficult, although capital is tremendously needed: Schramm and Carstens (2014, 45) state that a traditional bank loan may not be an option for start-ups within early stages,

when there is not existing a constant revenue yet, because hardly any financial institution can estimate the start-up's prospective success. That is why many banks are considering granting of a loan within early stages as being too risky. In addition, having a constant interest burden right from the beginning will narrow the start-up's financial scope of action down, which could lead to cash-flow problems. According to Beck (2014, 56) and a study from Deutsche Bank (2013, 5) another potential problem could be that the amount of capital the start-up is asking for depicts a too small need of capital from a bank's perspective, so that granting a loan is not attractive enough. Although the amount of capital needed during the early and expansion stages may be remarkable from the start-up's point of view, this may not be comparable to investments a bank could arrange with other, bigger companies.

To illustrate a bank loan's practical usability, an example will be developed here, which will be treated in the second theoretical chapter again: Two friends, who are passionate about longboarding, develop an idea to fabricate very exclusive and with the aid of special wood produced and refined boards. Because their idea is to manufacture each board out of one single piece of wood and not putting several components together as usually done, they think to revolutionize the manufacturing process and build a product that is more resilient. Having produced some testing products, which their friends were really enthusiastic about, they are expecting higher selling potential within the longboarding scene in their home town. After they expensed their savings to rent a small production facility and to buy materials, they now need capital to buy a new machine that is able to cut the wood really softly so that the product's quality can be improved significantly. To buy the machine they need 20.000 EUR. They decide to ask a bank for a loan, because they do not have contacts to Business Angels and they are too small to attract Venture Capital Investors. Although they would prefer an equity participation of the investor, they are convinced to be able bearing a constant interest yield connected with the loan. The problem is that the bank is not able to estimate their success in selling the product. Generally, the bank is considering the production idea as being not innovational enough and as both friends do not have other collaterals available, the bank decides not to grant a loan. Plus, the amount of money needed

seems to be not attractive enough, as the bank is usually closing deals on another level. Although the two friends' idea seems to be interesting and they are sure to reach more customers with their product, a financing cannot be guaranteed at the moment. Another potential source of financing that could help both friends will be examined starting from chapter 3.1.

In a nutshell, bank loans depict a very traditional way of financing, but are relatively difficult to obtain for a start-up due to reasons mentioned above. Thus, financing the business with the aid of bank loans could be of interest in later stages of the company's lifecycle, when the business is matured and considered to be less risky (see table number one). Nevertheless, financial institutions generally play an important role as intermediary of public funding. Here, banks are the link between public funding supported and advertised by the government and its own credit business (Hahn. 2014, 78). Therefore, acquiring a start-up in the early stage and arranging public funding may be of interest concerning a later credit business with the same company. What kind of public funding is available in Germany will be examined in the following.

2.5 Public funding in Germany

Due to a high economic value of young (technology-) enterprises that contribute to the overall welfare and innovation leadership of Germany, several means of funding supported from the government have been established. This kind of financial support is improving a start-up's financial situation by means of equity or specially developed loans, which have subsidized and thus very low interest yields. Improving a start-up's equity is especially of importance with regard to a subsequent debt-financing, for instance traditional bank loan, because here equity is needed in order to obtain a minimum equity ratio. Furthermore, public funding depicts an attractive opportunity, while other types of financing might fail, because their framing conditions are not fulfilled. Consequently, young start-up companies are depending on public funding to a certain extent, in order to establish a profitable business (Hahn. 2014, 63). Basically, founders of an enterprise have access to this kind of

financial support during each stage of their business. Depending on the industry, revenue and size of the business, there are several possible ways of public funding. What matters is for what purpose the financial means will be used exactly and that the business idea is considered to be innovational enough (Beck. 2014, 56). If these requirements are fulfilled, a public funding can normally be realized.

On behalf of grantors of public funding in Germany, the KfW institution is shown in figure number two. KfW translated means “financial institution for reconstruction” and was founded in 1948. It has its headquarters in Frankfurt am Main and its task was to fund the reconstruction of German economy after the end of Second World War (Homepage KfW). Nowadays, KfW institution is primarily known for funding of business start-ups characterized through low interest yields and to founders’ needs adapted preconditions, such as low equity ratios and limited liabilities. A possible way of public funding arranged by the KfW is “ERP Start-up Loan - Start-Geld”. ERP means “European Reconstruction Program” and depicts the financial source of loans provided by KfW. An ERP Start-up Loan has a term of five or ten years and is limited to 100.000 EUR. Advantage of this loan from a founder’s point of view is to have a fixed interest yield that is more favorable than for a conventional bank loan. In addition, KfW institution will renounce repayment of the loan for two years if requested. Paying just an interest yield that is relatively low compared to traditional banks and start repaying the loan only after two years, will improve the start-up’s financial scope of action and increase the chance of generating profits in the early stages (Homepage KfW). For a detailed list of public funding opportunities in Germany, please have a look at appendix number three.

Illustrating the usual process of public funding explains, why traditional financial institutions are playing the role of an intermediary, as mentioned in chapter 2.4.

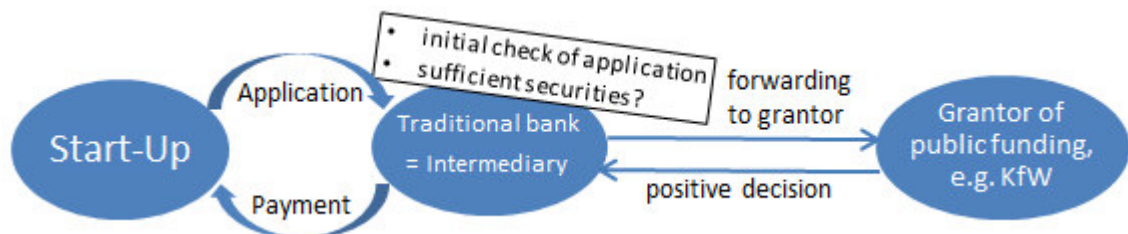


FIGURE 3. Simplified process of public funding in Germany.

(Own source).

Using the official description from KfW's homepage as a basis, a public funding through "ERP Start-up Loan – StartGeld" can be described as the following: After submitting an application form that can be downloaded from KfW's homepage, a traditional financial institution of the start-up's choice initially checks the form. Here, factors such as completeness and plausibility are taken into consideration. Also, if collateral is required, the bank verifies the applicant's financial background. In the following, the application will be forwarded to the grantor of public funding, in this case KfW. The KfW institution examines if each precondition of an "ERP Start-up Loan – StartGeld" is given, such as size of the business and if other public funding was granted already. After transferring a positive decision, the traditional bank will close the contract with the start-up. In case of ERP Start-up Loan the traditional bank will bear only 20% of the credit risk, whereas the KfW will bear 80% (Homepage KfW). Consequently and exemplary with the aid of "ERP Start-up Loan – StartGeld", public funding eases the challenge of early stages financing, especially compared to traditional bank loans. Here, decision making of granting a loan will be easier and more attractive for the bank, as risk is lower, so that the start-up will more likely obtain the amount of capital needed to realize its business.

3 CROWDINVESTING

Taking the information from chapter two into consideration, we can conclude that each financing has its advantages as well as disadvantages, predominantly depending on the current phase of the business. Here, it is important to balance corresponding consequences in order to guarantee a solid financing.

Crowdfunding depicts another source of financing for young start-up companies and it could help to overcome more easily the equity gap within early stages, which will be examined in the following theoretical part three. Before explaining its character and functionality, we first have to deal with the idea of Crowdsourcing, which is the origin of Crowdfunding according to Beck et al. (2014, 23).

3.1 Explanation of the Crowdfunding term

Crowdsourcing consists of two terms: *Crowd* in the sense of a large amount of foreign individuals and *outsourcing* of production or services. In this connection Crowdsourcing means “outsourcing tasks to the general public (crowd) with the intention of animating individuals to voluntarily make a contribution to the issue” (Lambert/ Schwenbacher. 2010, 4). The term of Crowdsourcing was initially used by Jeff Howe in 2006, describing, among other things, Wikipedia as the following: “It’s not outsourcing; it’s Crowdsourcing” (“The Rise of Crowdsourcing”, Wired Magazine 2006). In the case of Wikipedia, thousands of entries and definitions are given by the aid of volunteers from the crowd and not by companies or paid authors. Using the example of Wikipedia, advantages of Crowdsourcing are the following: Because of sharing the task, a crowd will act more efficient and often cheaper compared to a problem-solving traditionally done through outsourcing, since there are not arising fix costs and wages for staff (Baumann et al. 2014, 8). Of course, an application of Crowdsourcing is depending on the problem that has to be solved and has also its disadvantages. According to Beck (2014, 24) Crowdsourcing may not be an option, if data security or confidentiality of the project are important. Consequently, the idea of Crowdsourcing may be interesting to generate ideas, but cannot be applied if a complex issue has to be solved.

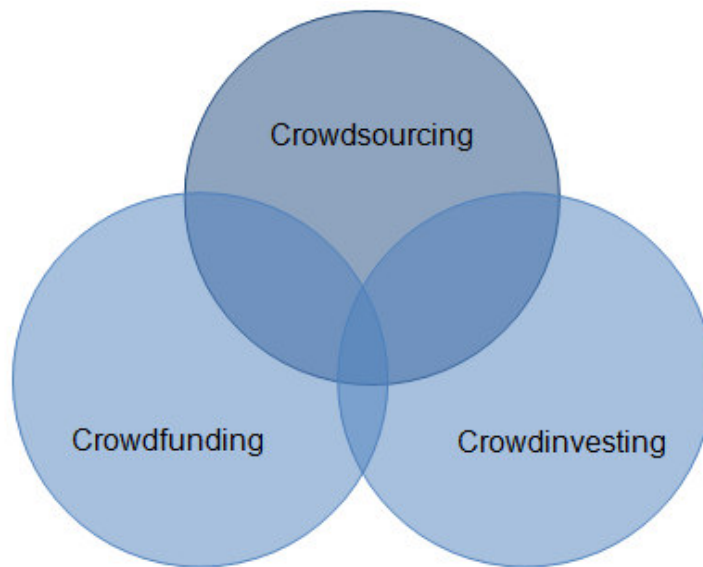


FIGURE 4. Relation of Crowdsourcing, Crowdfunding and Crowdinvesting.
(Own source).

Using the basic idea of obtaining ideas, feedback and solutions from the crowd to develop corporate activities, *Crowdfunding* originally comes from the broader concept of Crowdsourcing (Belleflamme/ Lambert/ Schwienbacher et al. 2013, 7). According to several authors and a general view of the internet, Crowdfunding can be defined as financing a project through several smaller amounts of money that are collected up by support of the internet (Hahn et al. 2014, 172). Here, a certain project will be portrayed on an online-crowdfunding-platform by its initiator, who tries to catch the platform-users' attention (crowd) and thus realize financing. Projects presented on a Crowdfunding platform can be of very different nature. However, a typical example would be an author aiming to realize printing of his book or a media company searching for money to make their latest movie (see example of "Stromberg" in the introduction). According to Kortleben and Vollmar et al. (2012, 4) a general characteristic of Crowdfunding is to give an intangible asset in return to the investor, as for example being part of the audience during an initial reading in case of supporting the author, or being named in the end credits of the movie in case of supporting the movie of Stromberg. Primarily, making a Crowdfunding investment intends support of a project that catches the investor's attention and not an insistence on a monetary return.

In contrast, *Crowdinvesting* is mainly characterized through a financing of young start-up companies (Baumann et al. 2014, 9) and a focus on monetary return from the investor's point of view. Like Crowdfunding, Crowdinvesting has the same principle regarding attracting investors: The business idea will be presented on a Crowdinvesting-platform on the internet as appealing as possible, in order to reach an investor basis, which is big enough to fund the business investing micro-payments. In the example of "Bergfürst" these kinds of micro-investments already start from 10 EUR per investment (Homepage Bergfürst). Contrary to Crowdfunding, a Crowdinvestor will obtain shares on the start-up in the size of his investment and also participation on profits (Kortleben/ Vollmar et al. 2012, 6). Depending on the platform's business model and form of participation, Crowdinvesting mainly depicts equity financing and that is why Crowdinvesting also is called "equity-based Crowdfunding" (Beck et al. 2014, 27). For a selection of Germany's leading Crowdinvesting platform providers, please have a look at appendix number four. Here, also the issue of different forms of participation will be outlined.

3.2 Crowdinvesting market in Germany

With a total volume of 25.8 million EUR, measured from January 2015 to the end of September 2015 (Study from German foundation organization. 2015, 5), Crowdinvesting depicts a niche financing product within the overall German financial market (Beck. 2014, 216). However, the difference of volumes funded, is based on the nature of Crowdinvesting: Given the fact that projects supported by Crowdinvesting generally have a smaller need of capital compared to bigger and more matured businesses (Schramm/ Carstens. 2014, 53), simplified representing the rest of the market, the contrast of the financing volumes appears logical. Considering that Seedmatch as pioneer platform provider was introduced in 2011 (Homepage Seedmatch), Crowdinvesting still depicts a quite new trend, which market also is very dynamic according to Hölzner, Kortleben and Biering (2014, 4): Since 2011, when Seedmatch launched its platform, a lot more platform-provider arose on the market, but disappeared due to missing specializations or a temporary hype. Failing platforms were for instance: Foundingcrowd, meet&seed, Berlin

Crowd, Seed Experts, Crowd Nine and Startkapital online (Hölnzer/ Kortleben/ Biering. 2014, 4). By today, only the two biggest platforms have established and sustained their positions in the market: Seedmatch and Companisto, which made together 86.4% of the overall Crowdfunding volume in Germany, measured from January to 30th September 2015 (Study from German foundation organization. 2015, 6). Market-leading platform is Companisto (49%) followed by Seedmatch (37%). These percentages indicate that the German Crowdfunding market is a highly concentrated one. Nevertheless, positions and market shares of each platform-provider can quickly change, as one single, very huge investment may distort competition: Since the overall volume of Crowdfunding was still quite small in 2015, one huge investment will have a big influence on the market and remarkably strengthen one single platform's position

Analyzing the volume of Crowdfunding in 2015 more detailed, findings are the following:

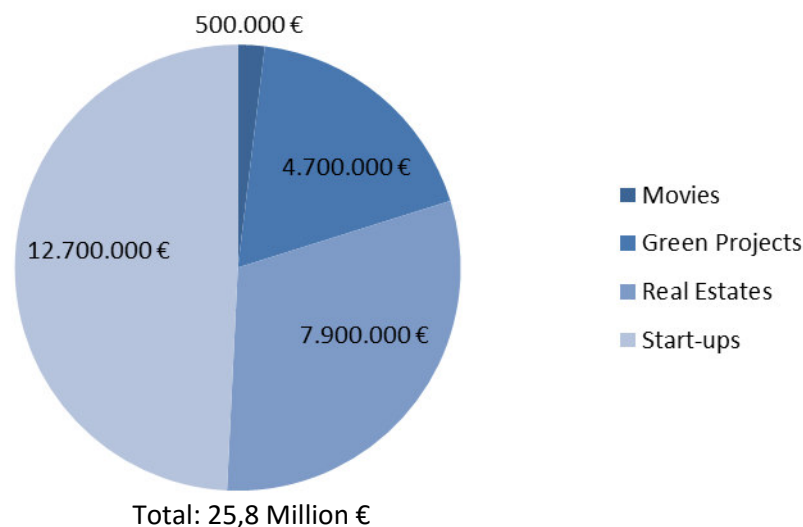


FIGURE 5. Crowdfunding volume by 30.09.2015 per investment area (million EUR).

(Based on study from German foundation organization. [https://www.fuer-gruender.de/fileadmin/mediapool/Unsere Studien/Crowdfinanzierung 9M 2015 F](https://www.fuer-gruender.de/fileadmin/mediapool/Unsere_Studien/Crowdfinanzierung_9M_2015_Fuer-Gruender.de_Dentons.pdf)
[uer-Gruender.de Dentons.pdf](https://www.fuer-gruender.de/fileadmin/mediapool/Unsere_Studien/Crowdfinanzierung_9M_2015_Fuer-Gruender.de_Dentons.pdf). Page 5.)

With a share of 12.7 million EUR, start-up financing represents 49% of the overall Crowdfunding volume in Germany. Apart from start-up financing, also movies, green projects and real estate-investments were supported by Crowdfunding platforms. Taking the definition from chapter 3.1 describing Crowdfunding as “mainly supporting start-ups” into consideration, we have to assume that each platform provider is able to decide, which projects will be published for investors. As an example, Companisto as market-leading platform and also Bergfürst offer real estate investments apart from start-up financing (see appendix number four). According to the study of German foundation organization (2015, 4), real-estate investments depict a quite recent trend within the area of Crowdfunding, characterized through a strong growth rate. Basically, the possibility of real-estate investments enables spreading of risk, as the investor can put his money in both, start-up ventures and real-estates. That is why also other platforms might consider to add real-estate investments to their portfolio, in order to strengthen the platform’s attractiveness for potential investors and to compete in the market (study from German foundation organization. 2015, 4).

Concentrating only on start-up financing, the market significantly grew from 2011 to 2013 and then remained stable (see figure number six). After recording a gentle decrease from 2013 to 2014, the growth rate can be described as moderate with an increase of around five percent, comparing the third quarter 2014 with 2015. Considering the fact that projects in the amount of 3.3 million EUR were still running at time of measurement (green bar), even the overall volume of financing 2013 will most likely have been exceeded in 2015. Unfortunately, there was no information available at point of this analysis, so that a proof cannot be given. Examining the growth rate, the number of start-ups financed has decreased from 2014 to 2015 (46 compared to 36), but the financing volume per financing round increased from an average volume of 264.000 EUR in 2014 to 354.000 EUR in 2015. That is why German Crowdfunding market generally recorded a growth from third quarter 2014 to third quarter 2015.

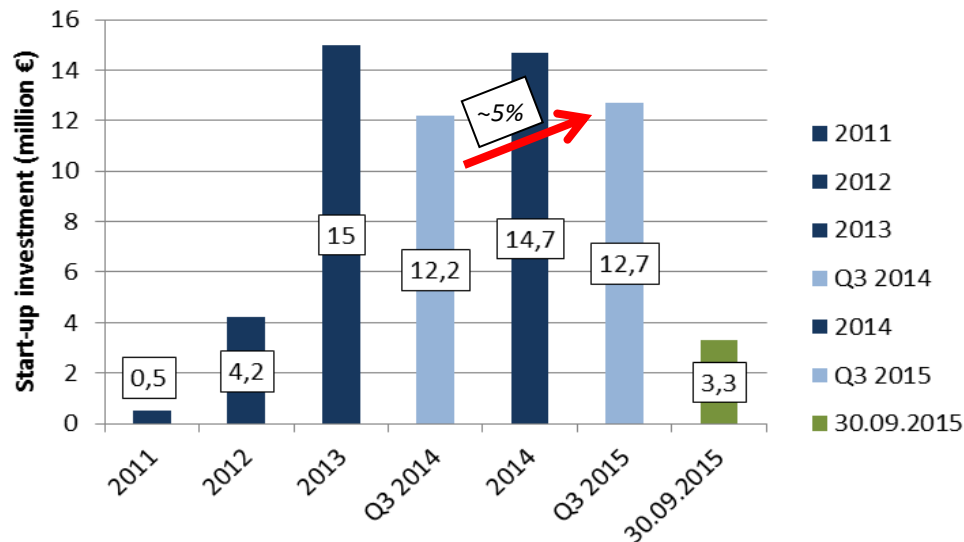


FIGURE 6. Start-up capital raised on the basis of Crowdfunding (million EUR).
(Based on study from German foundation organization. 2015, [https://www.fuer-gruender.de/fileadmin/mediapool/Unsere Studien/Crowdfinanzierung_9M_2015_Fuer-Gruender.de_Dentons.pdf](https://www.fuer-gruender.de/fileadmin/mediapool/Unsere_Studien/Crowdfinanzierung_9M_2015_Fuer-Gruender.de_Dentons.pdf). Page 6.)

3.3 The funding process

In this chapter, Crowdfunding will be examined regarding the process of financing and different phases within the collaboration of its three main participants: the start-up searching for money, the platform acting as intermediary and the investor. According to Hagedorn and Pinkwart (2013, 22) the process of Crowdfunding can be described as the following:

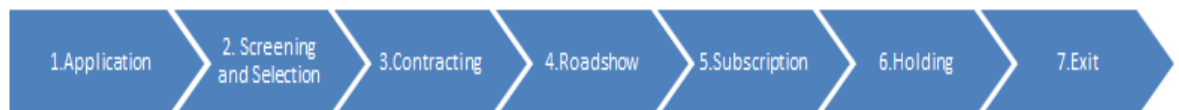


FIGURE 7. Phases within the process of Crowdfunding.

(Based on: Hagedorn, A./ Pinkwart, A. 2013. Crowdfunding as a Financing Instrument for Startups in Germany. Page 22.)

Because of benefiting from a platform's infrastructure regarding the investors-community, a start-up will most likely choose a platform to publish its business

idea. Basically, a start-up can also search for investors on its own, but it is more efficient having access to a huge investor basis and also not dealing with legal requirements, such as type of participation and contracting conditions. But before getting in contact with potential investors, a business start-up has to apply at the platform of its choice. Most often, application will be submitted via e-mail, sending a so-called “pitchdeck”, which includes data on the business, such as idea, product, customer group and profitability planning (Schramm/ Carstens. 2014, 92).

Performing a simplified due diligence, the platform provider will select the best applications for publication. According to Hagedorn and Pinkwart (2013, 22) this due diligence will cover factors like credit-ratings, personality tests and business plan evaluations on the basis of innovativeness, possible imitation and customer benefit. Another important point of investigation will be the expected future value of the company in order to prove its attractiveness for investors. Basically, publishing and thus enabling financing of business ideas that will most likely fail, will negatively influence the platform’s reputation on both sides: Investors and start-ups. Therefore, a precise examination of the start-up’s application is considered to be inevitable from a Crowdfunding platform’s perspective (Beck. 2014, 195).

But also from the start-up’s point of view, a profound analysis of platforms offering Crowdfunding is essential: Not only different types of participation, but also additional services that often must be paid have to be well balanced in advance. These kind of services are, for instance, support in creation of a pitching video that will be published later to attract investors (Pinkwart/ Hagedorn. 2013, 24). Having a business plan that is evaluated to be realistic and profitable enough, the platform provider will settle with the founder on financial and managerial conditions: Hagedorn and Pinkwart state that choice of an appropriate participation will be made here and also a service fee will be charged.

In the following “Roadshow” phase, the platform provider announces the new investment opportunity, uploading the pitching video and providing the business plan. Since the idea will be shared with a large group of unknown people, a potential risk of imitation of the business idea is given: As a competitor may belong to the platform users, access to the business idea is granted for outstanding persons, who might try launching the same product or service or at least copying parts of it.

Further possible risks and problems arising from the relation of start-up, platform provider and investor will be outlined in chapter 3.4.

If the business is considered to be attractive from an investor's point of view, he is able to support the idea. Here, certain framing conditions are coming into play. Not only a pre-defined time span for investment, but also a minimum amount of money that has to be invested will have an influence on the investor's financial input (Hagedorn/ Pinkwart. 2013, 26). Another important issue is the financing target, which is a fixed sum of capital a start-up aims to collect by support of the platform users and which future usage often is treated in the pitching video. Only if the financing target will be reached during the beforehand defined time span, subscription of shares on the start-up and funding of the business can be executed. Otherwise, the platform users will be reimbursed for the amount of money invested until point of expiration of the time span. To make their business model profitable, the platform will charge another fee at point of subscription. Depending on the platform this fee will be 5-10% (Seedmatch) or 10% (Companisto) of the overall funding volume (Baumann et al. 2014, 87).

If framing conditions of the investment are fulfilled and both parties agreed on the contract, the investor will receive shares on the start-up until the end of the holding period. According to Hagedorn and Pinkwart (2013, 27) most often the holding period of shares lasts five to ten years, but is generally depending on the platform provider's business model. Since a shorter holding period would signify quick re-funding of shares from the start-up's point of view, which would be hard to realize due to missing liquidity in the early stages, most platforms decided to define this term for holding the shares. Furthermore, each company is obligated to provide information on the business development for its investor community during the "Holding" phase, which is based on the investor's claim on monitoring rights.

At the end of participation, the investor can either prolong his investment or exit the company, which is depending on the contracted conditions. However, according to Hagedorn and Pinkwart (2013, 28) a cancelling of participation at the end of holding period will most often be agreed. In case of a profit-participating subordinated loan, which is the most common way to handle participation in Germany (see appendix number four), the investor will be refunded the amount of money invested during the "Subscription" phase plus a fixed interest yield. Of course, this

is only possible, if the business performed well and reached profitability during the holding period. Likewise, the business model could not have generated enough profit so that a refunding at the end of the holding phase cannot be realized. In the worst case, the investor might totally lose his money.

3.4 Principal – Agent – Theory

The Principal-Agent-Theory depicts a solid model within the field of business administration and was treated by many authors already. Explaining the theory and its belonging problems in detail is not part of this thesis, but, nevertheless, a short insight into the model will be given at this point, as it can also be applied on Crowdfunding. According to Pratt and Zeckhauser (1985, 2) roles within the Principal-Agent-Theory can be described as the following: “Whenever one individual depends on the action of another, an *agency relationship* arises. The individual taking the action is called the *agent*. The affected party is the *principal*.” Generally, this theory is dealing with information asymmetries, whilst the agent usually knows more about the task than his principal (information leadership of the agent). Kinds of information asymmetries are “hidden characteristics”, “hidden information” or “hidden intention” from the agent’s point of action. Furthermore, the theory presumes that the individuals within the relationship will act like a “Homo oeconomicus”, which means to maximize the own profit in every situation. Completing the characteristics of the agent and principal, the model also presumes that both will behave, if required, in an opportunistic way. It includes fraudulent behavior as well as cozenage or further dishonest means, to realize profit-maximizing (Beyer/ Heyd et al. 2011, 19-20). Taking these presumptions as a basis, several potential problems can arise from the information asymmetries within the relation of principal and agent. These problems are called “Adverse Selection” in case of hidden characteristics, “Moral Hazard” in case of hidden information” or “Hold Up” in case of hidden intention (Beyer/ Heyd et al. 2011, 30).

Applying the model on Crowdfunding and the relation of its three main participants, several potential problems can be identified. The following figure only illus-

trates possible tensions, where business start-ups are playing the role of the principal and are therefore confronted with information deficits, which may negatively influence their process of financing. With regard to Crowdfunding's attractiveness for start-up enterprises, potential effects related to both problem relations have to be taken into consideration.

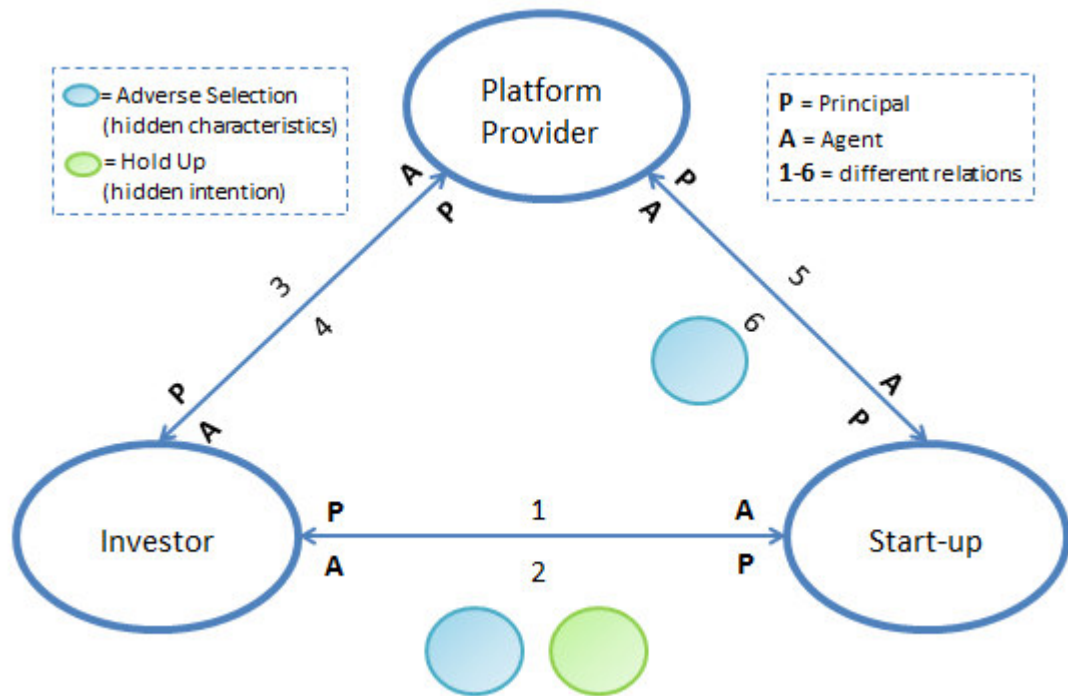


FIGURE 8. Principal-Agent-Problems in the relation of start-up, platform provider and investor: Critical relations from a start-up's point of view.

(Based on: Kortleben, H./ Vollmar, B. 2012. Crowdfunding – eine Alternative in der Gründungsfinanzierung? Page 21.)

Basically, six potential relations are existing, but only relation two and six will be explained at this point due to reasons mentioned above.

In relation two the investor is playing the role of an agent and the start-up of the principal. Here, two problem constellations can be detected: Adverse Selection and Hold up. At point of the roadshow phase, when the start-up is searching for investors, the financial background of them is not visible. It could happen that an investor plays part in reaching the financing target, although he has not enough financial means available to realize funding. In case the start-up did not reach an "over-financing" of the target, a whole financing process may fail, because of this single investor. In case the financing target was exceeded, founders will at least ob-

tain less money as planned. Hidden financial characteristics of the investor may signify an adverse selection-problem in this constellation. In addition, the purpose of being registered as user on a Crowdfunding platform is not identifiable neither from the start-up's perspective (hidden intention). Consequently, a hold up can be detected, too. Registration may only be based on financial support of young companies, but could also have other reasons, as, for example, informing about competitors. Publishing the business idea on the internet, may thus raise the risk of imitation. To solve these problems, an initial transfer of money of the investor, right after clicking the "invest-button", but before expiration of the time span for investments and a more precise screening of the platform's users is important. Nevertheless, the risk of imitating the idea cannot totally be eliminated. Here, technological or process-related advantages may be the best protection. (Kortleben/Vollmar. 2012, 23).

Relation six describes the collaboration between start-up and platform provider. Here, the provider is the agent and start-up again principal. In this relation, only one problem can be detected: Adverse selection. Because of an uncertainty of reaching enough investors and thus generating enough money to reach the financing target, hidden characteristics of the subsequent financing process occur. In the case of not reaching the financing target, the start-up will not bear a financial risk indeed, because failure of financing does not cause any fees, but time for presenting and applying at the platform will at least have been wasted. As a solution, the platform could provide information on the number of users and the potential capital available, in order to signalize how much capital could generally be invested. This information could for instance be surveyed, when the user registers on the platform (Kortleben/ Vollmar. 2012, 25).

In a nutshell, many different problems in the relation of start-up, platform and investor can theoretically occur, while two have been exemplified here. Both may negatively influence Crowdfunding's attractiveness for start-up businesses, because of information deficits, but the likelihood in practice remains unclear. To get an insight into the practical relevance of these problem constellations, relation two and six will be examined again in the empirical part.

3.5 Legal requirements in Germany

Until today, no concrete legal framework for Crowdfunding has been set by the German government. Nevertheless, general regulations of the German financial market also affect the area of Crowdfunding. Until a corresponding law will have been introduced, Crowdfunding will be embedded in these general regulations: Since a platform provider acts as an intermediary in a market for investment possibilities, there are arising regulatory law requirements, indicating that investments mediated by Crowdfunding platforms have to be approved by BaFin (Hahn. 2014, 185). BaFin translated means “Federal Institution for Surveillance of Financial Services” and belongs to the German Federal Ministry of Finance. Basically, BaFin’s task is to overview processes in the area of banking and financial services, in order to protect the German financial market. Practically, a platform provider will once obtain a license by BaFin and will be empowered to offer Crowdfunding possibilities from this point on.

Additionally, §6 VermAnlG has also to be taken into consideration: As Crowdfunding depicts a public investment offer attracting many potential investors, preconditions of §6 VermAnlG are met so that obligation of a “securities prospectus requirement” can be applied here (Hahn. 2014, 187). According to Beck (2014, 42), creation of such a securities prospectus will be quite time intense for a start-up, as the investment possibility has to be described in detail including information that exceeds the frame of the pitching video and the ordinary application at the platform. Aim is to enable an appropriate judgement on the investment opportunity for the potential buyer. Because this securities prospectus calls for an official document, often foreign companies have to be employed for creation, too, and that is why it also is very expensive for the company (Beck. 2014, 42). It also has to be checked and approved by BaFin, before the investment possibility is allowed to be published on the platform (Baumann. 2014, 86). Exempted from a securities prospectus requirement are only investments lower than 100.000 EUR or those having less than twenty shareholders (§2 VermAnlG). The last is very unlikely as Crowdfunding usually is characterized through a large number of foreign investors, at any rate having more than twenty, and being restricted to 100.000 EUR also is disadvantageous from a start-up’s point of view (Beck et al. 2014, 42). To

conclude, creation of a securities prospectus will be quite demanding for a start-up and can be judged to be a discouraging obstacle on the way to collect capital via Crowdfunding. Being restricted to collect only 100.000 EUR or obligated to create the securities prospectus brings the founder's team in a difficult situation of balancing between not being able to cover the full amount of the future intended investment by Crowdfunding and additional expenditures caused by the prospectus (Beck. 2014, 42+43). That is why many platforms decided to offer profit-participating, subordinated loans as type of participation (see appendix number four), which were excluded from §§2+6 VermAnlG until 22nd November 2014: Because of not emitting shares on the business, but loans that only involve duty for repayment and interest yield, a profit-participating, subordinated loan cannot be subsumed under §§2+6 VermAnlG (Hahn. 2014, 187). Thus, there existed a loophole in the legal framework that could be utilized by every platform. In her dissertation (2014, 88), Baumann states that it is just a matter of time until the legal loophole will be closed, as the Federal Ministry of Finance was already considering to introduce a securities prospectus requirement also for profit-participating, subordinated loans at point of her analysis in 2014. Today, there does exist §2a VermAnlG, which is especially dealing with Crowdfunding and Crowdfunding as publicly mediating investment possibilities for foreign people and which was decided on 22nd November 2014 by the German government. It now closes the legal loophole, subsuming every type of participation, including profit-participating, subordinated loans, under §§2+6 VermAnlG and thus implying a securities prospectus requirement. Supplementing the exemptions mentioned above, Crowdfunding opportunities are now excluded from a securities prospectus, if the investment sum is not exceeding 2.5 million EUR and each member of the crowd is not investing more than 1.000 EUR (§2a I+III VermAnlG). In case the investor can supply information on a personal liquid property of more than 100.000 EUR he is restricted to 10.000 EUR per investment (§2a II VermAnlG). Having set these additional framing conditions for Crowdfunding, the German government tried to increase securities and minimize the risk of financial failure for investors. At the same time, attractiveness of Crowdfunding was enhanced for start-ups, because the former limit of financing of 100.000 EUR was raised to 2.5 million EUR. Thus, being confronted with the creation of a securities prospectus is now more unlikely from a

start-up's perspective, because the maximum sum of financing of 2.5 million EUR is more comfortable.

However, if need of a securities prospectus is still concerning start-up enterprises, while funding the business by aid of Crowdfunding, will be handled in the empirical part.

3.6 Benefits of Crowdfunding

Focusing again on the example from chapter 2.4 of two friends producing longboards and who are now searching 20.000 EUR to buy the new machine, Crowdfunding could help to attract investors more easily. While traditional sources of financing fail, due to missing contacts and a too small need of capital, Crowdfunding enables sharing of the business idea with a wide group of potential buyers via the internet and thus reaching the attention of several smaller contributors of capital. Especially, in case of such a life-style product, some parts of a platform's user basis might be inspired and consequently become investors. Although the business idea might rationally be considered as 'too risky' or 'not profitable enough' from an institution's perspective, members of the platform might simply be impressed by the product and consequently invest their money: The relative small amount that has to be invested and the attractiveness to uncomplicated participate in the development of innovative projects might outweigh doubts regarding profitability from a Crowdfunder's point of view (Beck. 2014, 64). Practically, both friends will have to choose a legal form for their Business in order to apply at a platform and of course, attracting enough investors will depend on the quality of the pitching video and their ability to inspire the crowd. Basically, Crowdfunding depicts a way to finance a project for everybody, as long as the application at the platform will be accepted and the idea is attracting enough investors. Access requirements for this type of financing are more simply compared to the necessity of Business Angels contacts and the preconditions for other types of traditional financing (see chapter two).

3.6.1 Substitute to traditional financing possibilities

The fictive example from above is dealing with a squeeze of capital in the early stages of a company's development, which is characteristic for many start-ups according to Beck et al. (2014, 53): Because financing through Bootstrapping will most likely not suffice until profitability phase of a company, as already explained in chapter 2.1, there arises an equity gap in the early stages, which has to be covered. Access to traditional sources of financing is quite complicated during this phase of the business: Since an overall investor's view on the business is to prove its profitability before an investing becomes attractive (Beck. 2014, 53), both, bank loans and Venture Capital, can mostly be excluded as financing instrument within a company's seed or start-up stage. Thus, other sources of financing have to cover the equity gap, although the business is still considered to be immature and risky. Because participation of a Business Angel also depends on the individual network of the founder and skill to inspire someone for the own business idea, this potential financing instrument cannot be seen as a safe solution to overcome the equity gap: Either a founder's team is fortunate to reach Business Angel participation on the business or not (Beck. 2014, 53). To ease the equity problem for German start-ups, the government decided to establish public funding as additional source of financing. However, a huge amount of different funding possibilities (extract: see appendix number three) combined with bureaucratic barriers impede its practical usability and may appear deterrent for business founders (Beck. 2014, 56). Consequently, there arises a call for further and more innovative forms of funding that can be applied during the early stages. Here, Crowdfunding is getting interesting.

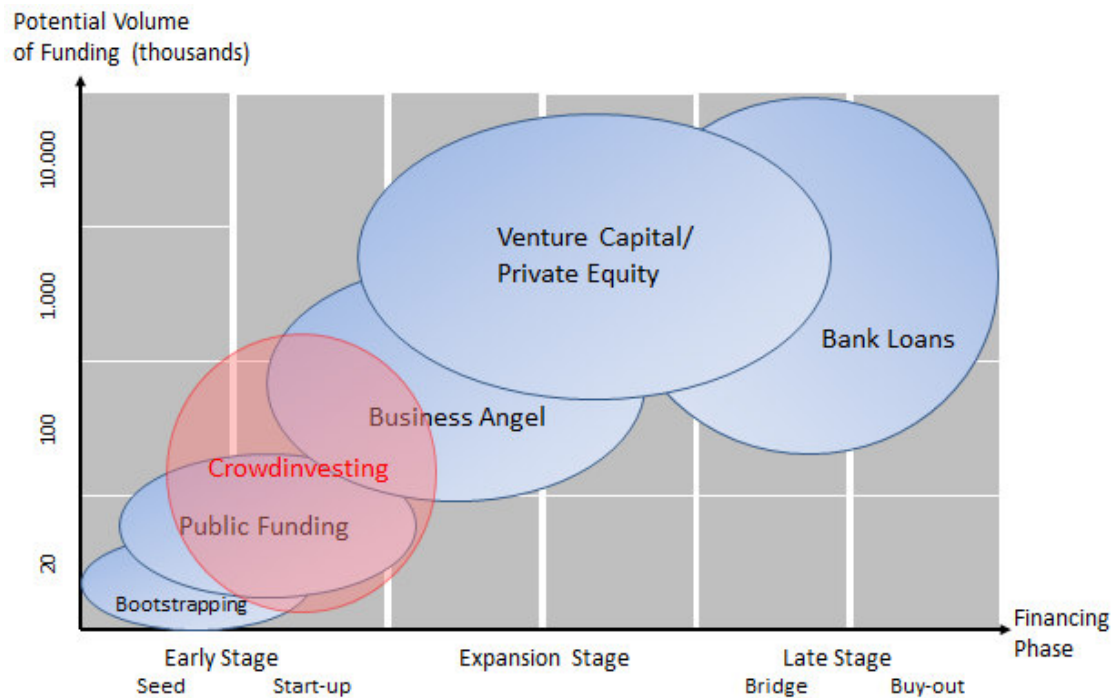


FIGURE 9. Crowdfunding compared to traditional financing possibilities within a company's lifecycle.

(Based on: Beck, R. 2014. Crowdfunding. Die Investition der Vielen. Page 52.; Kortleben, H./ Vollmar, B. 2012. Crowdfunding – eine Alternative in der Gründungsfinanzierung? Page 7.)

As shown in figure nine, Crowdfunding depicts an alternative to raise capital in the early stages of a company's development, but which amount of funding is relative small compared to other traditional financing possibilities. It helps to close the equity gap arising from a lack of access to means of financing like Venture Capital, bank loans and partly Business Angels (Beck. 2014, 60). As substitute to these traditional financing possibilities and additionally to public funding, Crowdfunding has the potential to overcome the issue of equity gap (Hagedorn/ Pinkwart. 2013, 6). What makes Crowdfunding especially for young and non-bureaucratic start-up companies attractive are its simple access requirements, meaning to attract investors in an easy, uncomplicated way, as shown in the preceding example, combined with its relative low level of legal commitments (Beck. 2014, 61): Since the conditions for contracting and participation are set by the platform already, the start-up does not have to deal with these issues and can concentrate more on the business development, besides saving costs for legal advice. On the side of inves-

tors, not only taking part in the development of an innovative business, but also the potential of generating extremely high profit margins vis-à-vis losing a relative small amount of money plays an important role for motivation. Disadvantage of a funding realized by Crowdfunding is a sole monetary support of the company, but no additional supply of help in managerial tasks, which is a big advantage of Business Angel financing for instance. According to Beck et al. (2014, 67) bringing only monetary support determines Crowdfunding to be “stupid money”, whereas Business Angel financing and Venture Capital are considered to be “smart money”. Depending on the industry and personal know-how of the founder’s team, a lack of managerial support can be identified as big disadvantage of Crowdfunding. To prove its attractiveness for German start-up enterprises within early stages and its potential to overcome the equity gap, Crowdfunding will be examined again in the empirical part here.

3.6.2 Market research opportunity

Apart from its financing role, Crowdfunding may also depict a way to test the market’s reaction towards a planned product or service. Mollick (2013, 3) as well as Schramm and Carstens (2014, 47) state that it could be used to demonstrate demand for a proposed product and thus deduce its necessity for the market. Since the investment of a platform-member could be linked to an emotional involvement concerning the product, the number of investors could imply the customer’s usability and value as well. Of course, this would assume that the platform provider’s user basis fits to the target group of the start-up’s product or service. In either case, a start-up will obtain important feed-back from the crowd and thus conduct market research as side-product of the financing process. Compared to costly market research executed by specialized agencies, this will be more attractive to young companies with regard to a general weak financial situation in the early stages. However, validity of the amount of investors implying desire on the planned product or service remains unclear. Mollick (2013, 4), for instance, questions: “Does the crowd fund projects that signal potential quality, or is some less rational selection system at work?” To make it more tangible, a start-up will not be

able to judge, if an investor supports the project because of his own persuasion of the business idea and his conviction towards necessity of the product, or because many other users already invested. That would imply that a crowd's behavior could be comparable with a swarm: One user following the broad mass without reflecting, but pursuing the motto: "the product has to be worth it investing, because many others already invested their money, so I will do the same". To many start-ups this may not be of main interest, because financing the project has priority, but obtaining falsified results from a market research conducted through Crowdfunding could lead to wrong managerial decisions of the founder's team. Generally, this is a more psychological subject and many authors are dealing with the issue of the crowd being comparable with a swarm. The psychological motivation of Crowdfunders is not part of this thesis, but, nevertheless, the potential of conducting market research as side-product for German start-ups, while raising capital on the basis of Crowdfunding, is quite interesting and will be handled again in the following empirical part.

3.6.3 Marketing effect

Furthermore, a Crowdfunding process could also have effects in the means of marketing and advertising the company. As Crowdfunding still represents a recent and innovative form of financing, a successful funding will promote the business as being innovational as well and generally raise attention. At least, a promotion by the investors will most likely happen, which is particularly important for young start-up companies in order to enlarge the customer basis (Schramm/ Carstens. 2014, 46). In addition, corresponding media agencies, journalists or bloggers might report about the funding process of the particular company and produce an additional appreciation of the business also on the side of further investors, including Business Angels, and thus increasing the chance of a future second financing (Schramm/ Carstens. 2014, 46). Considering that traditional financing methods, such as bank loans and Venture Capital, do not produce an outstanding marketing and advertising effect, the innovational character of Crowdfunding depicts a big advantage for start-up enterprises. Mollick (2013, 3) even states that

Crowdfunding “has [intentionally] been used for marketing purposes, creating interest and new projects in the early stages of development“ and thus highlights its function of advertising. Connected to this, Hölzner, Kortleben and Biering analyzed in their study (2014, 6) that advertising the product was even more important for the number of companies examined than raising capital.

Taking the information from chapter 3.6 into account, we can conclude that Crowdfunding has advantages that are exceeding its pure role of financing: The possibility to conduct market research as well as advertising and promoting the own business in order to raise attention for potential customers and further investors. If this theoretical approach fits to the practice will be examined now.

4 CROWDINVESTING IN GERMANY: EMPIRICAL INVESTIGATION

4.1 Survey (quantitative research)

To verify findings from the preceding theoretical chapters, a survey has been conducted with thirteen German start-up companies, which was created by aid of webropol surveys (full survey: see appendix number five). Most of the companies were still in the early stage development at point of surveying, proven by low turnover numbers, small number of employees and year of foundation (appendix number five, question one). Consequently, these companies were temporally shortly linked to the issue of early stage financing and could therefore be consulted to analyze Crowdfunding's potential within this phase. Moreover, there was no focus placed on one particular industry, but start-up financing investigated as a whole across all business areas, which is why business ideas variate between smartphone-applications and care products for men as an extreme example (full list of participants: again see appendix number five, question one). To complete the view on the survey group, four start-ups analyzed did belong to the personal network of the author, but which were all-together not using Crowdfunding in their company's early stage. By examining belonging homepages of Germany's leading Crowdfunding platform providers, a lot more start-up companies could have been detected that took Crowdfunding into consideration to cover their need of capital in the enterprise's beginning phase. In the following, these companies were contacted via email or by phone, but getting into deeper relation and thus obtaining survey sheets in return was quite hard to realize, due to time-based obstacles or missing forwarding to respective contact persons. Nevertheless, thirteen surveys could have been completed, while in total 65 start-ups were contacted, which implies a response rate of 20%.

4.1.1 Examination of three main theories

Overall aim of the survey was to analyze Crowdfunding's attractiveness for start-up companies in the early stage development in comparison to traditional financing means. Here, especially three theories from chapter 3.6 were point of investi-

gation, but also concepts from Principal-Agent-Theory as well as legal requirements have been part of the survey. To start with, the issue of financing should be embedded into further tasks or challenges a start-up faces, when beginning its operations. Therefore, question number two was created: *What kind of challenges did you face when setting the business?* Here, financing as well as marketing/ addressing customers turned out to be the most frequent challenges for start-up enterprises, while second even predominated financing. On the other side, managerial tasks and missing know-how did consider fewer entrepreneurs. This outcome implies that, besides covering expenses to realize the business idea, attracting customers and making the business popular to reach selling potential is a decisive factor of success. The potential of advertising the company as side-product while starting a Crowdinvestment, as explicated in chapter 3.6.3, could deliver an answer to both challenges, but which will be answered later.

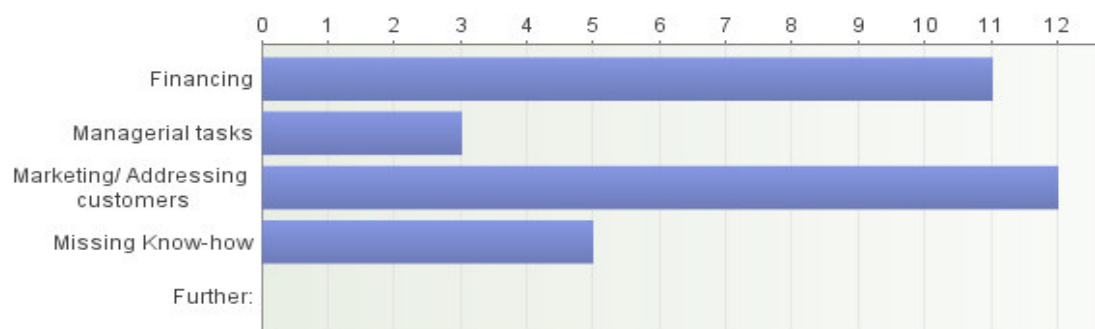


FIGURE 10. Challenges when setting the business (N=13).

(Exported from webropol.)

To first deal with, theory from chapter 3.6.1, describing Crowdinvesting to have the potential to substitute traditional forms of financing, will be examined. To obtain practical relevance of this phenomenon, question number three was developed: *Which of the following financing methods did you take into consideration during seed-stages of your business?*

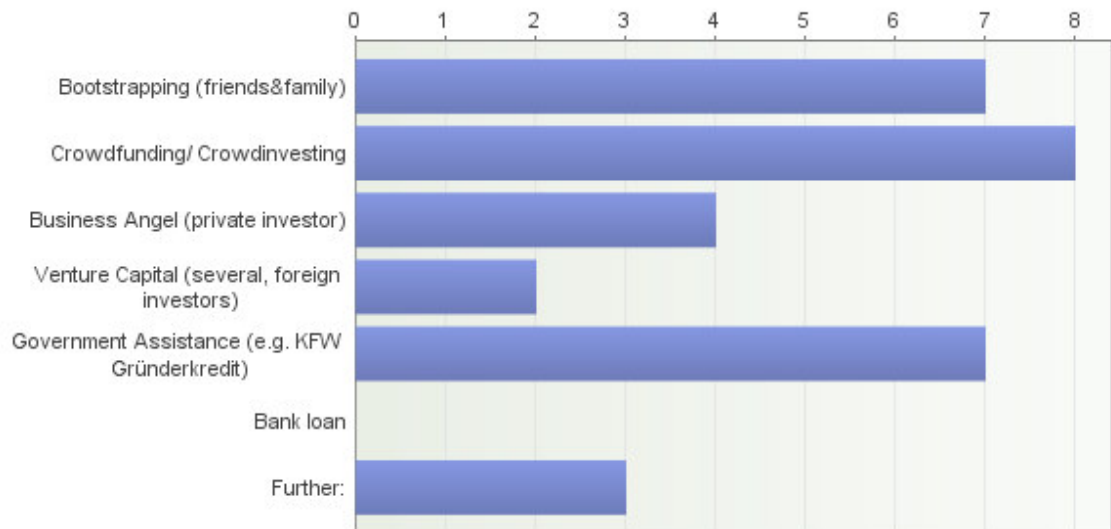


FIGURE 11. Financing methods taken into consideration during seed stage development (N=13).

(Exported from webropol.)

Here, a trend could be confirmed that Crowdinvesting has significant relevance for young start-up enterprises, especially in comparison with traditional forms of financing, which fosters the theoretical approach from chapter 3.6.1.: While minority of start-ups analyzed used Venture Capital or Business Angels to strengthen their equity position in seed stages, the majority had access to Crowdinvesting, Bootstrapping and public funding. Given the fact that none of the participating companies had access to bank loans and only two had access to Venture Capital, disadvantages regarding seed stages financing become obvious. Furthermore, four start-ups used Business Angels within beginning phase of their business, which indicates that usage of a Business Angel depends on individual needs, as, for instance, only capital vis-a-vis primary know-how and of course existing networks. This was also demonstrated by answers from question number nineteen, which will be portrayed in the results part. Generally, the allocation of respective funding supports their individual capability for usage in seed stages from a start-up company's point of view and correlates with the theoretical assumptions from chapter 2. In addition, it can be said that Crowdinvesting supplemented by public funding and Bootstrapping depicted the most common way to overcome the equity gap for the majority of companies analyzed. Complemented by the outcome of question number four (see appendix number five), a conclusion of Crowdinvesting being a

substitute can be drawn: Here, the percentage of each financing compared to the whole volume of funding was asked. Since Bootstrapping sufficed in average only for 25% of the whole volume, there was a call for further financing types. Given the fact that seven out of thirteen companies used Crowdfunding to cover 50% or more of the equity gap and again seven out of thirteen companies public funding to cover 25% up to 50%, the finding from above describing these financing types as being the most common way to overcome the equity gap can be confirmed. Furthermore, Crowdfunding has bigger percentages in average than public funding, which proves that it can be seen as an important source of capital, at least for the group of start-ups analyzed. Here, also the level of turnover and size of the business, which indicates the required sum of capital, has to be taken into account. Basically, rather smaller businesses could be supported by Crowdfunding, since demand of capital overweighs further needs, like specific know-how. To complete the picture, bigger companies surveyed, presenting turnover numbers from 900.000 EUR onwards, solely used Venture Capital or Business Angels to overcome their squeeze of capital and to realize growth (see appendix number five, question four), what is precisely due to the reasons mentioned above. It thus indicates that Crowdfunding primary depicts small capital support. However, it can be seen as substitute to traditional forms of financing, because of a significant proportion within seed stage financing, which proves practical relevance of this type of financing. Basically, Crowdfunding broadens the mind for start-ups regarding financing and enables closing of equity gap.

In the following, theories 3.6.2 and 3.6.3 were analyzed. In order to be able to assess the answers of the participants, they were first confronted with the concept and meaning of Crowdfunding and Crowdfunding (questions six and seven). Generally, it can be said that all participants were familiar with Crowdfunding and its belonging characteristics, whereas separation to Crowdfunding was successfully given by fewer (see appendix number five). However, the basic idea of primary supporting start-ups was seen so that an evaluation of subsequent questions eight to ten could be granted. In order to prove Crowdfunding's ability to conduct market research as side-product, which appears interesting to start-up enterprises, because of cost-savings, question number eight was developed: *Do you think*

Crowdfunding depicts a way to test the market's reaction towards a planned product or service? (E.g. amount of people investing money can show a tendency concerning necessity of and desire on your product/ service).

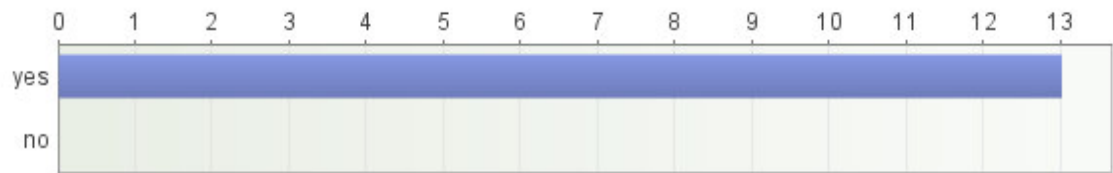


FIGURE 12. Participants' view on an existing market research opportunity (N=13). (Exported from webropol.)

Here, 100% of the participants were in favor with the potential of conducting market research. Although some of the participants had no access to Crowdfunding within the early stage development of their company, a general evaluation could be given here, as long as familiarity with the concept of Crowdfunding is granted. As exemplified above, any participant was admitted knowledge in this area. Thus, it can be constituted that the theoretical assumption from chapter 3.6.2, ensuring Crowdfunding additional effects apart from his pure financing role, was proven in practice based on the outcome of the survey. Although no concrete example regarding the own business was required, the potential to test the market before introducing a product or service was confirmed throughout the participating group.

In addition, theoretical presumption from chapter 3.6.3 was verified as well. Here, Crowdfunding were granted opportunities related to marketing, because of its innovational nature. Question number ten revealed the following: *Do you think Crowdfunding can raise attention on your business, due to its innovational character? (A new and attractive form of financing).*



FIGURE 13. Participants' view on an existing marketing effect (N=13). (Exported from webropol.)

Again, 100% of the participating start-up representatives said that they believe in this effect. However and in contrast to question number eight, a concrete prove was required here, which leads to question number ten: *Did Crowdinvesting have an additional marketing effect on your business?*

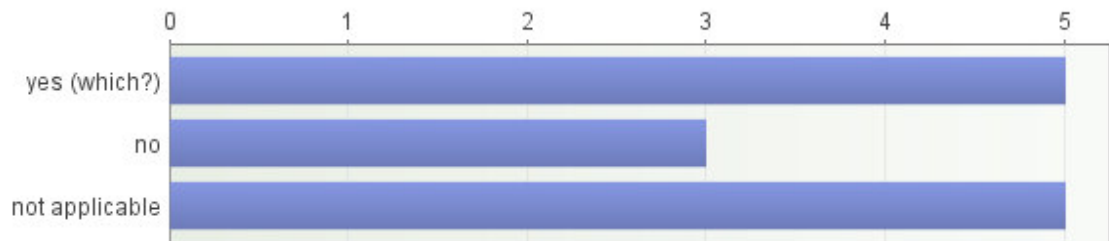


FIGURE 14. Tangible marketing effect on the participating start-ups' businesses during financing round (N=13).

(Exported from webropol.)

Goal of this question was to feed preceding question number nine with additional practical information. Remarkable is that any of the participants was granting marketing effects in question number nine, although some did not use Crowdinvesting and consequently answered with "no" or "not applicable" in question number ten. This outcome essentially proves that practice and theory deviate from each other: While each of the participants was supporting Crowdinvesting's innovational character and its belonging ability to advertise the business in preceding question, only smaller part of the participants was confirming in question ten by means of practical examples. This phenomenon could imply that marketing effect of Crowdinvesting may decisively depend on the industry and the product: Business ideas based on the internet are rather relying on financial support, whereas business ideas closely connected to the customer, as for instance customized fragrances (appendix number five: question number one), can benefit from its additional possibility of promotion. Within five participants, who were giving concrete practical confirmation, marketing effects on their businesses were the following: "Directly creating interest and attracting customers and, generally, promotion of the business idea in corresponding media" (appendix number five: question number ten). To conclude, it can be said that Crowdinvesting's potential to promote the business as second side-product, linked to an innovational and attracting form of financing, could be confirmed in practice, with exemption that primary business ideas closely linked to

the customer are able to enjoy it. Advertising the company may also deliver an answer to the problem arising from question number one of the survey: Not only financing, but marketing/ addressing customers was concerning the majority of start-up enterprises analyzed. Therefore, it can be said that Crowdfunding is able to deliver input to this problem, although addressing customers will most likely have to be completed by further forms of direct marketing.

4.1.2 Practical relevance of Principal-Agent problems

Another point of investigation arising from the preceding theoretical chapters was practical relevance of Principal-Agent problems. Here, it has to be said that only constellations, where the start-up is playing the role of the principal, were chosen for investigation in the empirical part, because these constellations may negatively influence the start-up's position (lack of information of the start-up). In contrast, remaining problem constellations are only affecting the start-up in a positive way, because of information leadership, which potentially, and supplementary to motives analyzed until this point, increases attractiveness of Crowdfunding. With regard to a well-balanced analysis of Crowdfunding's potential for start-up enterprises, especially possible negative factors have to be taken into consideration: According chapter 3.4, relevant problem constellations are therefore relation two and six. Here, the start-up is confronted with an unknown background of the investor on the one hand, which possibly causes copying of the business idea, or failure in reaching the financing target, due to weak financial resources (relation two). On the other hand, collaboration between start-up and platform provider can be seen critical (relation six), because the start-up has to rely on the individual selection process of business ideas that are going to be chosen for publication. Furthermore and in connection to the issue mentioned before in relation two, the start-up has also to rely on the information given on the investors' community, too. To evaluate the potential of Crowdfunding for German start-up enterprises, these possible negative effects were examined in practice (appendix number five: questions number twelve, thirteen and fifteen to seventeen. Concerning relation two, the following questions were posed: *Did somebody use your business idea for his own,*

after you published it on a Crowdfunding platform? And in addition: Did you reach your financing target with your first attempt? Throughout the participating group, only one start-up said that the financing target was not reached within first financing round, while the rest of the participants negated problems concerning missing liquidity of the investors, or problems concerning attainment of the financing target in general (appendix number five, question fifteen). Also none of the participants was confirming that the issue of imitating business ideas has practical relevance (appendix number five, question thirteen). Thus, it can be stated that problem constellation two within Principal-Agent-Theory does not depict threat for start-up enterprises in practice. Consequently, doubts regarding an investor's background do typically not affect young businesses and only exist in theory. Moreover, problem constellation six was examined regarding practical relevance with aid of the following questions: *Did you apply for a Crowdfunding platform, but your business idea was not chosen for publication? Did you publish your business idea on several Crowdfunding platforms?* Here, the outcome was quite similar compared to the preceding examination. While none of the participating start-ups was admitting problems regarding the selection process of business ideas (appendix number five, question twelve), only one participant said that he was publishing the business idea on more than one platform (appendix number five, question sixteen). It implies that possible tensions in collaboration with the platform provider do normally not affect the process of Crowdfunding for start-up enterprises in practice. Reasons, why one participant was using several platforms for publication, remain unclear. Most likely, it happened because of increasing the chance for a positive financing round, or maybe due to market research reasons. However, a proof cannot be given here. Nevertheless, a clear tendency concerning practical relevance of the respective Principal-Agent problem is not influenced by this answer. In addition, results from question number seventeen support the perception. Participating start-up companies were confronted with the following question: *Did one of your investors expect different benefit from his investment than you could offer to him?* Here, none of the participants affirmed oppositional views on the investor's benefit (appendix number five, question seventeen), which fosters perception that problem constellation six has more or less no practical relevance. To conclude, it can be said that there do exist several potential conflicts in

theory, represented with aid of Principal-Agent-Theory, but practical proof was not given, at least for problem constellations two and six, which would affect start-up enterprises in a negative way regarding attractiveness of Crowdfunding.

4.1.3 Practical relevance of securities prospectus requirement

Furthermore, impeding legal requirements were investigated within the survey. Question number eighteen should deliver practical input at this point: *Did legal requirements impede or influence your process of Crowdfunding? (E.g. maximum amount of money that is allowed to be financed.)*

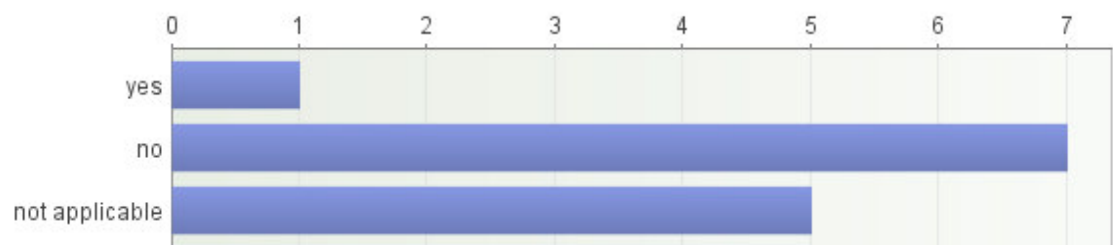


FIGURE 15. Legal requirements influencing the financing process (N=13).
(Exported from webropol.)

As shown in the graphic, one participant was giving proof for impeding legal requirements during the process of Crowdfunding. The rest of the participating start-ups were negating the fact that, for instance, maximum amount of money that is allowed to be collected was influencing the activity of raising capital with aid of the crowd. Given the fact that §2a VermAnlG was introduced at the end of 2014 (compare chapter 3.5), which extended the securities prospectus free financing volume to 2.5 million EUR, affirming company will most likely have been founded before 2014. According question number one, there are four companies that are existing longer than since 2014 and which are possible respondents here. However, practical relevance of impeding legal requirements was basically denied by the survey. Probably, this is because of an increased securities prospectus free volume of 2.5 million EUR, which can hardly be reached by start-up enterprises. Consequently, it can be stated that a securities prospectus requirement do not affect many start-up enterprises in practice anymore. Also, other legal require-

ments, such as regulatory law requirements from BaFin, could not be confirmed regarding practical relevance. As further finding it can be said that introducing §2a VermAnlG was decisive to effectively stimulate the German Crowdfunding market and to make it attractive for future intended investments, because of enlarging the prospectus free financing volume.

4.1.4 Further findings

In addition to the perceptions so far, some general views on the German Crowdfunding market could be confirmed throughout the survey. Especially market concentration and proof of the two leading platform providers was given. According question number five, Seedmatch and Companisto are the most frequently used online platform providers within the participating group, which fosters market description from chapter 3.2. Also market concentration was affirmed throughout the survey: While several start-up enterprises used Seedmatch or Companisto, only one start-up each was considering Startnext and Innovestment. Giving the fact that one participant was indicating usage of several platforms for publication of the business idea (see question number sixteen), more chosen answers than participating start-ups appear logical and can therefore be explained. *In case you used Crowdfunding: On which of the following platforms did you publish your business idea / where did you search for investors?*

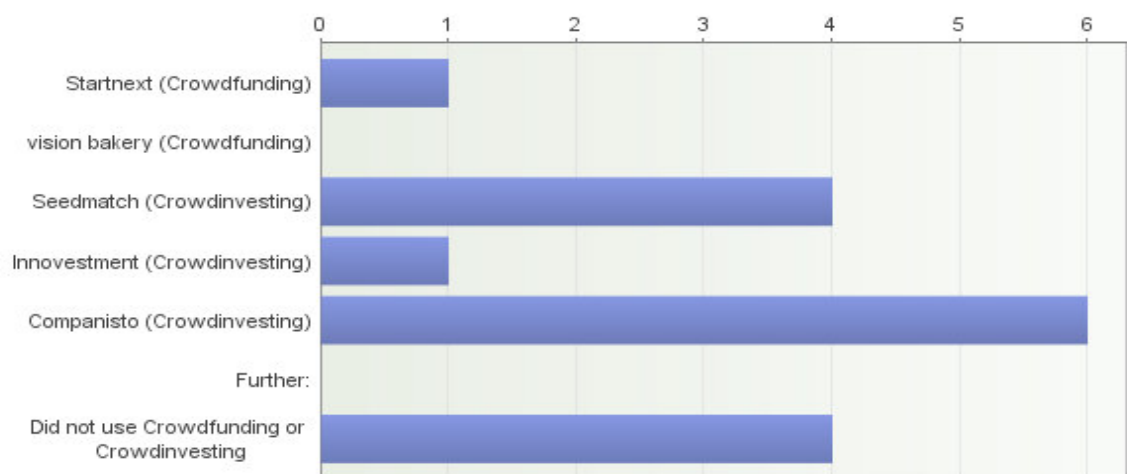


FIGURE 16. Platforms chosen for publication (N=13).

(Exported from webropol.)

Furthermore, motivation for selection of the corresponding platform provider became obvious in question number fourteen. Here, participants were asked, *why they chose their specific platform* (appendix number five, question fourteen). Overall motivation for choice was reputation and number of registered users, which signifies size of the crowd and chance to reach financing target throughout the investment process. In addition, types of projects being financed at point of application did also affect choice of respective platform provider.

4.2 Interview (qualitative research)

Because respond rate of the surveys was quite low and a relative small group of start-ups could be surveyed in general, a qualitative interview was developed as well. Here, the goal was to get deeper insight into attractiveness of Crowdinvesting for German start-up enterprises and to get information from an industry's insider.

Interviewee was Dr. Yassin Hankir, who is founder and Chief Executive Officer (CEO) of savedroid, which is a financial technology start-up from Frankfurt, also called FinTech. The company was established in 2015 and has ten employees at the moment. Since launch of the company's product is going to be operated in July 2016, savedroid is still in the seed phase within early stage development and has no turnover numbers yet. Business model of savedroid is to save money in daily-life situations by aid of personally defined rules. Practically, the company developed a mobile phone application, where a user is able to create individual rules, also called smoooves ("smart saving moves"), and thus provoke saving in certain situations. For instance, a user can decide that going for a run with runtastic application will automatically save five EUR from his or her bank account. Basically, a user is able to link daily-life situations with saving money, which can be used to realize individual wishes or simply to have a financial input at the end of month. As savedroid's business model is connected to a financial intermediary service, the company belongs to the area of FinTech start-up enterprises.

In order to verify the interviewee's statements and to make them reliable as qualitative source, Yassin Hankir's background will be explained in the following: Be-

sides initiating savedroid, Yassin is also co-host of the FinTech Meetup Frankfurt, which aims fostering of networks for financial technology start-up enthusiasts. Plus, he helped to co-found the Robo-Advisor Vaamo, which also is a FinTech from Frankfurt that specializes to offer customer-adapted asset investment. Before becoming an entrepreneur, he worked as Engagement Manager at McKinsey & Company, Inc. During his consulting job he focused on retail and private banking, especially growth strategies, product development and implementation, as well as marketing and distribution. He worked for two years in the company's office in Frankfurt and thereafter another two years in the Singapore office. Furthermore, Yassin completed his master in Economics and his doctor of philosophy (Ph.D.) in Finance at Goethe-University in Frankfurt, Germany.

The interview was conducted in savedroid's office in Frankfurt and recorded in German. Afterwards it was translated into English. Key findings will be presented in the following. To see the complete interview, please have a look at appendix number six.

4.2.1 Examination of three main theories

The interview revealed that savedroid was overcoming the company's early stage equity gap by means of Bootstrapping, public funding possibilities granted by the German government and Business Angel investors (question one). The decision at the expense of Crowdfunding was based on the type of product savedroid is going to sell as well as on readiness to assume risk regarding German investment behavior (question two): Hankir states that Crowdfunding will especially be successful for B-to-C products that are easy to understand from the Crowd's perspective and quickly can arouse enthusiasm, which raises chance of successfully financing the project. In case of savedroid, a more sophisticated product is going to be launched, which is related to the area of virtual financial services and which does not belong to the group of products defined above. Moreover, Hankir states that adventurous investments, such as Crowdfunding, are still not depicting a mass product, which is due to a general risk averseness of German investors. Apart

from these two limiting factors of Crowdfunding's success, another very important fact was influencing the decision in favor of Business Angel investors: Already existing personal contacts. According to Hankir this is the most essential precondition, because of established bonds of trust. Relating to the business, the company is able to benefit from the investor's reputation within the industry and existing networks, which also may lead to further investments in the future. Besides, support regarding questions of business development will be granted, too. Compared to Crowdfunding, which mainly depicts capital support according to Hankir, these advantages of Business angel participation was convincing the founding team. The assumption of Crowdfunding being a substitute to traditional means of financing was expanded here. The interview revealed that it can mainly be used as a substitute for B-to-C businesses with simple products, which narrows the assumptions from chapter 3.6.1 down to a specific industry. Furthermore, the interview has shown that Business Angel participation often depicts extensive support of the founding team, which cannot be guaranteed by Crowdfunding. Thus, the term of substitution in the meaning of replacing traditional forms of financing cannot be applied at least for Business Angels. In fact, both types of financing are differing concerning business benefits, while Business Angel participation advantages outweigh.

However, Crowdfunding also has characteristics apart from financing according to Hankir, which meets theoretical presumption from chapter 3.6.3 (questions two and three). In terms of simple products, which are tangible and quickly to comprehend for the crowd, there are arising product multiplier and community effects that can be subsumed under Crowdfunding's nature of being a marketing tool. Practically, a crowd realizing financing of the project will most likely be customers in the future as well as promoters within their friends, which will make to business more popular. It implies that business ideas connected to a tangible customer product may benefit from Crowdfunding's potential of generating further attention, which is particularly important for business start-ups.

Furthermore, the issue of conducting market research, while publishing the pitching video and derive market's demand in terms of number of investors, was treat-

ed in the interview as well (question three). Here, Hankir had a very clear position: Because of a bad reputation within the investor's community in case of a failed financing round, conducting market research by aid of Crowdfunding should not be done as a proof of a concept and consequently not depict main motivation, when initiating a Crowdfunding process. It should rather be seen as a second additional benefit, apart from advertising the company, and also be done before searching for investors, because of obtaining valuable negotiation arguments.

4.2.2 Practical relevance of Principal-Agent problems

Throughout the interview, there arose several disadvantages of Crowdfunding, as already treated above (questions two and three), but which cannot be subsumed under Principal-Agent problems. Nevertheless, the interviewee was not directly confronted with these theoretical paradigms. However, Hankir was asked to give his opinion on Crowdfunding's acceptability regarding start-up financing (question three) and also on negative aspects related to financing (question two). Here, there was no hint given in matters of threat of business imitation as well as problems related to an investor's background. Thus, assumption from the survey that problem constellations two and six do not have considerable practical relevance for business start-ups can be confirmed here.

4.2.3 Practical relevance of securities prospectus requirement

Concerning practical relevance of legal restrictions represented by a securities prospectus requirement, the interview revealed the following: Because of implementing §2a VermAnlG in 2014 that enlarged the prospectus free financing sum, attractiveness of Crowdfunding was raised for start-ups, which was important in order to stimulate the market. By increasing the financing limit during a Crowdfunding process, also secureness for investors was improved. Basically, more matured businesses, which typically need more capital, are addressed than before. Because of having proved the company's position in the market already, these

investments are less risky compared to typical seed stage businesses that are more confronted with market survival issues and uncertainties. Thus, softened legal requirements did improve Crowdinvesting's framing conditions for both, investors and start-ups.

4.2.4 Further findings

Furthermore, the interview delivered input to other and general topics. To start with, Crowdinvesting's ability to enable further financing in sorts of a bank loan, as rudimentary handled at the beginning of chapter 2.5, was treated. Hankir states that besides having an appropriate relation between equity and required sum of capital, granting of a loan will also depend on assets that can be used as collateral. As business start-ups do normally not possess high asset values, providing of appropriate securities will remain unlikely in most cases. In addition, the company's business stage will most likely not fit to the loan's preconditions, as start-ups are too risky and unpredictable. Furthermore, granting of a loan will also depend on the enterprise's daily need of capital, so called 'cash burn', which implies impact of the beforehand raised financing sum on the business. Thus, enabling further financing in sorts of a bank loan with the aid of a precedent Crowdinvesting process will be quite complicated for start-up enterprises, which is why theoretical approach from chapter 2.5 remains questionable.

Moreover, the interview revealed a decisive factor of success of Crowdinvesting, which was not handled before: The investors' behavior influencing future market potential. It became obvious that German investment mentality is connected to a general risk averseness, which is also shown at the moment. Although interest rates are historically low, as instructed by the European Central Bank, number of stock investors is even decreasing. It can therefore be stated that the method of raising capital via the internet and support of high-risk start-up enterprises is not appealing to the broad mass at the moment in Germany. Crowdinvesting rather depicts a niche financing product, which goes along with the market analysis from chapter 3.2. Besides a change of German investment mentality, future market de-

velopment will also depend on additionally softened legal requirements and new platform players entering the market that will increase Crowdinvesting's popularity.

4.3 Results

The interview supports key findings from the survey concerning access-possibilities to traditional forms of financing from a business start-up's point of view. Undoubtedly, bank loans depict a weak opportunity to overcome the equity gap as well as Venture Capital, due to a non-matching business phase and therefore related high risk potentials. Plus, the financing volume does not fit to the investor's idea in most cases. Furthermore, the interview revealed that a very large offer of public funding possibilities combined with bureaucratic application obstacles is confusing many entrepreneurs, which correlates with the literature from the theoretical analysis in chapter 3.6. In addition, application often is very time-consuming and sometimes connected to supplemental costs, which both is impeding a start-up's daily business. According the interview, Business Angel investors represent a huge potential for start-up enterprises, because of their reputation within the industry that could lead to further investments in the future and also because of their know-how, which is important to develop the business. However, the survey revealed that only small number of companies analyzed took advantage of this form of financing, which is quite obviously due to a lack of appropriate contacts. Attracting a private investor will most likely depend on the founding team's personal network and already existing bonds of trust, which cannot be presumed for majority of start-up enterprises. Here, founders are depending on anonymous applications and an uncertainty regarding inspiring an investor. Consequently, the issue of financing, especially during early stage development, is quite difficult to solve and calls for further options in order to cover the equity gap.

Crowdinvesting depicts an alternative that extends the range of offer for start-up enterprises, as proven by the survey's outcome. Generally, it is characterized through uncomplicated access criteria and small capital support within early stage development, which appears attractive for business start-ups. In addition, entre-

preneurs, who decided to raise capital with the aid of Crowdfunding, are able to enjoy full responsibility of the business and do not have to admit rights of co determination for the investors, as revealed by the survey. Here, it is important to balance the decision regarding choice of appropriate platform provider, since business models and corresponding types of participation may differ. Nevertheless, Crowdfunding mainly represents capital support and no advice in managerial tasks and also the potential of generating further contacts is limited, especially in comparison to Business Angel investors. Furthermore, the interview has shown that it is primarily useful for start-up enterprises, which are going to sell a B-to-C product that is easy to understand from the crowd's perspective. Only if a product concept will quickly be comprehended by the crowd and if customer benefits appear obvious, a Crowdfunding process will be successful. Regarding these types of products, Crowdfunding is able to substitute traditional forms of financing with the exception of Business Angels, which is based on corresponding additional business benefits.

Concerning the above defined type of product, Crowdfunding can ensure additional product multiplier effects, because of promotion and user networks. It implies that there is existing another very important characteristic, apart from the pure role of financing: A decisive marketing effect, which was already treated in the theoretical analysis in chapter 3.6.3 and also proven by the survey's outcome in question number ten. Certainly, this effect can deliver an answer to a challenge most of start-up enterprises analyzed in the survey were confronted with, disregarding the issue of financing: Addressing customers and promoting the product turned out to be an essential factor of success within their early stage development. Hence, Crowdfunding's marketing effect can ease the issue of promotion, but is depending on the product's characteristics and its simplicity from the customer's point of view.

Aside from the marketing effect, Crowdfunding also has the potential to test a market's reaction towards a planned product or service. However and as the interview has shown, this should not be main motivation for an entrepreneur regarding a decision to initiate a Crowdfunding process. In case of a failed financing round,

the product will be connected to a bad reputation and therefore discourage further potential investors. According the interview, conducting market research should rather be done before searching for investors, in order to have persuading arguments for negotiation.

Moreover, the analysis has revealed that relevant Principal-Agent problems from chapter 3.4 rather depict threat for business founders in theory. Throughout the survey group there was no confirmation given that risk of imitating the business idea was concerning a founding team, after a pitching video was published. Apart from that, proof regarding an existing incertitude in terms of reaching the financing target at point of application was given neither. Also collaboration with platform providers was seen uncomplicated: discrepancies concerning selection process of business ideas, which were chosen for publication, could not be affirmed. Hence, Crowdfunding's attractiveness for start-up enterprises is not negatively affected here.

Another finding from the empirical part is related to the legal framework of Crowdfunding in Germany. It became obvious that lightened up financing limits connected to the implementation of §2a VermAnlG was enhancing attractiveness for start-up enterprises: The survey has shown that enlarging the prospectus free financing volume led to higher financial flexibility and less bureaucratic barriers for start-up companies, which was important to stimulate the market. Furthermore, also secureness for investors was raised, because higher financing limits generally enable participation of more matured businesses. Basically, these companies need more capital to finance growth and are less risky, compared to typical seed stage businesses that are connected to an uncertainty concerning competing in the market. Thus, softened legal requirements did improve Crowdfunding's framing conditions for both, investors and start-ups, and prepares for future market growth.

Furthermore, Crowdfunding's ability to enable further financing in sorts of a bank loan, as described in chapter 2.5, remains questionable. Theoretical approach is to first raise capital with the aid of the crowd and, as second step, use the collected

amount of money as equity ratio, in order to apply for a loan. In case of practical applicability, the area of Crowdfunding would have high future potential, since it could generally be used as a financing basis. However, the interview has shown that this approach is problematic. Besides having an appropriate relation between equity and required sum of capital, granting of a loan will also depend on assets that can be used as collateral. As business start-ups normally do not possess high asset values, providing of appropriate securities will remain unlikely in most cases. In addition, business phases of companies applying for a loan will most likely not fit to a bank's requirements in terms of risk potential.

Beyond that, there arose some overall information on the market of Crowdfunding throughout the survey and interview. Because start-up financing depicts only small part of the entire financial market and German investment behavior generally is connected to risk avoidance, Crowdfunding represents a niche financing product. The market itself is highly concentrated, as only two big platforms have sustained their positions, which was also shown in the survey. Here, it became obvious that number of registered investors as well as types of projects being financed at point of application, did affect a company's decision regarding choice of appropriate platform. Apart from developments in the area of German risk mentality, number of new platform providers, which are going to stimulate the market and make the financing process itself more popular, will be decisive in order to estimate future potential.

4.4 Conclusions

Aim of this thesis was to exemplify the overall financial framework of German start-up enterprises within seed stage development. In general, the financial situation including an often existing equity gap should be described and different traditional financing possibilities portrayed as means to cope with the financial squeeze. Here, requirements for access and applicability regarding seed stage financing should be analyzed from a start-up enterprise's point of view. Based on the findings, Crowdfunding should be presented as an alternative. Apart from describing

the funding process and giving overall information, such as market data, benefits of this type of financing should be evaluated.

The analysis has shown that limited own financial sources of the founders combined with a challenging practicability of traditional financing possibilities are often causing an equity gap within early stage development: Since granting of bank loans and Venture Capital participation remain questionable during this phase of the company's lifecycle, there is a need of alternative financing opportunities. Most often, Business Angel participation as well as government assistance in terms of public funding is taken into consideration. Nevertheless, specific obstacles related to both types of financing are complicating the issue of covering the equity gap, as extensively discussed in the analysis. Here, Crowdfunding is getting interesting. Returning to the research questions, which were defined in the introduction part, will help in order to evaluate, which role Crowdfunding is playing within the financial framework of start-up enterprises:

Does Crowdfunding depict an alternative source of financing for German Start-up companies compared to traditional financing possibilities?

Basically, Crowdfunding extends the offer of financing opportunities for business foundations and depicts an alternative. It is characterized through small capital support and has the ability to realize business ideas. Beneficial easy entry requirements of this type of financing, such as registration on relevant platform and publication of a pitching video, raise attractiveness for business start-ups and increase applicability regarding seed stage financing. Also legal type of participation seems beneficial for business founders: Since most platform providers decided to mediate profit-participating, subordinated loans, independency regarding managerial decisions often will be granted. However, the empirical part revealed that mainly business ideas directly connected to the customer are able to benefit from Crowdfunding, because of more likely reaching the crowd and arousing enthusiasm. It implies that Crowdfunding's potential of being an alternative regarding seed stage financing is narrowed down to a certain industry. In addition, Crowdfunding mainly represents financial support, but no supply of supplemental business-specific know-how. Especially in comparison with Business Angel participation this characteristic has to be seen as disadvantage. Thus, Crowdfunding can

be valued as an alternative in means of complement to traditional forms of financing, which are applicable in the same development stage, as, for instance, public funding and Business Angel participation. However, a general substitution of traditional financing possibilities has to be seen critical, as a non-existing supply of business-related know-how and also realized funding volumes are limiting factors, which are partly eliminated by corresponding traditional types of financing.

What makes Crowdfunding attractive?

Apart from above named benefits, there are existing other characteristics of Crowdfunding that are raising its attractiveness. Especially supplemental marketing effects in sorts of promoting the business and enlarging customer basis seems to be motivational: In terms of B-to-C products, which are quickly to comprehend from the crowd's perspective, a successful funding process will most likely lead to an initial user base as well as product multipliers, who are enhancing the enterprise's popularity. Furthermore, the ability to derive future intended demand from the number of investors granting capital, is attracting business start-ups. However, this cannot suffice as proof of concept and has rather to be seen as side-effect of the financing process.

Furthermore, does Crowdfunding have the potential to overcome the issue of equity gap within early stages of an enterprise's development more easily?

With regard to complementing traditional forms of financing like public funding and Business Angel participation, we have to subsume that Crowdfunding eases the challenge of covering the equity gap, because of enlarging the offer of financing possibilities. However, an industry-dependency and an uncertainty concerning a successful financing round leads to the conclusion that Crowdfunding cannot be seen as safe solution. It is still a niche financing product, which is mainly due to the German investor's behavior in terms of risk averseness.

5 SUMMARY AND OUTLOOK

Business start-ups are becoming more and more attractive for potential founders, because of beneficial political and economic frame conditions and an increasing support from the government in terms of public funding opportunities. Since changed future visions of younger generations are connected to claims of self-fulfillment and self-realization, the area of business foundations is nowadays generally connected to enthusiasm. However, the issue of financing the project is concerning most entrepreneurs. Because relative weak own financial backings seldom suffice until profitability stage, founders are depending on external financial support in order to cover an arising equity gap. Here, established traditional forms of financing, such as bank loans, can often hardly be taken into consideration: Basically, business start-ups are representing a high-risk participation, which is often not fitting to an investor's claim. Thus, Crowdfunding is getting interesting, because of expanding the financing framework for start-up enterprises. It is generally characterized through small capital support and beneficial easy entry requirements, which appears attractive for entrepreneurs. This thesis delivered theoretical and practical input to the issue, how big Crowdfunding's influence is on start-up financing in Germany and if this innovational form of financing has potential to be established as serious alternative within early stage development. It thus contributed to a subject, many business founders are currently confronted with.

At the beginning of the analysis, the general financial framework of start-up enterprises within early stage development was portrayed. Here, five main traditional forms of financing were analyzed: Bootstrapping, Business Angel participation, Venture Capital investment, bank loan financing and public funding opportunities. It turned out that possibilities of access to these forms of financing are individually limited based on personal networks of the founding team, too small need of capital from the investor's point of view and a general risky phase of the business development. With regard to a need of complementing forms of sourcing, Crowdfunding was evaluated in the following. Apart from explaining the term, describing the funding process and providing data on the market in Germany, main benefits of using this type of financing were highlighted. It became obvious that particularly

marketing effects and opportunity to conduct market research during financing rounds are depicting decisive factors of motivation for start-up enterprises. Besides, favorable entry requirements, such as simple registration on platform and quick creation of a pitching video, may cause that Crowdfunding will be established as financing alternative. In contrast, possible tensions in the collaboration of start-up venture, platform provider and investor, represented by Principal-Agent-Theory, were illustrated as negative factor. Additionally, significance of legal restrictions, such as securities prospectus requirement, could build another limiting factor of Crowdfunding's attractiveness for German business founders.

The empirical part investigated, if theoretical assumptions fit to the practice and aimed to deliver deeper insight into Crowdfunding's relevance. Hence, a survey was set up with thirteen German start-up businesses as quantitative research. In addition, an interview was conducted with a founder from the FinTech industry and classified as qualitative research. Here, structure of investigation was created symmetrically for both forms of research: Firstly, main benefits of Crowdfunding, as described above, were examined. Secondly, practical relevance of Principal-Agent problems and securities prospectus requirement was analyzed. In addition, the survey as well as the interview revealed further findings regarding Crowdfunding's attractiveness for German start-up enterprises, which were presented at the end of the corresponding chapter. After summarizing results from the survey and interview and checking coherence with regard to content of both research types, the conclusions part was classifying the information to the big picture of the thesis by answering the research questions from the introduction part.

The analysis has shown that Crowdfunding is still representing a niche financing product, which is mainly based on German investors' behavior in terms of risk averseness. Furthermore, its advantages with regard to start-up financing are narrowed down to a specific industry: Mainly business ideas directly connected to the customer, characterized through simple products, are able to enjoy benefits in terms of advertising the company and conducting market research. In addition, Crowdfunding's characteristic of primary granting monetary support, but no supply of business-related know-how, leads to the conclusion that traditional forms of

financing, such as Business Angel participation, are hardly able to be substituted. Apart from that, the empirical investigation revealed that relevance of Principal-Agent problems and necessity of a security prospectus, while raising capital with aid of the crowd, is affecting fewest start-up ventures.

The future development of Crowdfunding will decisively depend on a change of the average investor's funding behavior in terms of risk averseness. Other nations, as, for instance, the United States, are demonstrating that sympathy with risky, but innovative business start-ups can go along with sustainable growth and financial profits for the investors. Here, platform players, such as Kickstarter, are mediating significant financing volumes and supporting business foundations on a grand scale. The future will show, how German investment behavior will change and if Crowdfunding is going to be established as serious financing alternative. Furthermore, a continuing easing of legal requirements as well as new platform players entering the market will be important to make Crowdfunding more popular. In addition, size and popularity of future funded projects will influence significance of Crowdfunding.

5.1 Reflection of the working methods

Having an extensive range of literature, studies and online sources, which all-together highlighted the issue of start-up financing in a very different way, a solid basis for the analysis could be set. With aid of the material, theoretical assumptions of Crowdfunding's characteristics and applicability regarding seed stage financing were developed. In the following, the empirical part extensively proved in practice, if these assumptions are realistic. Certainly, this was a decisive part of the work and characterized through high efforts. Particularly collecting answers from the survey was challenging to manage. In contrast, the interview was really informative and led to further perspectives. Basically, a high coherence with regard to contents was ensured in the thesis. Here, the working method was characterized through a problem oriented analysis, including short conclusions at the end of each chapter that were classifying the information into the big picture.

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APPENDICES

Appendix 1. One Pager from BAND.

Company (name)		Foundation			
Address (Street, ...)		Contact person			
Tel. Fax		E-Mail Internet			
Team of foundation (name/s or am./function)					
Industry.					
Business idea in one sentence					
Short, precise and also for non-industrial persons comprehensive description of the Business idea. How are you going to earn money with your Business idea?					
Product & Customer benefit					
Please describe your product/service and highlight the customer's main benefit.					
USPs (Technology, patents)					
Explain why you are more innovative than your competitors (e.g. special technologies, business-specific know-how, a patent, outstanding market entry etc.).					
Information on the market (customers, partners, competitors & size of the market ...)					
Describe your Business-related market (e.g. region, industry, who is your customer? Purchasing behaviour etc.). Explain your situation of competitors (e.g. recent competitors, competitors who could enter the market on the short-term, other products/services that can offer the same/comparable benefit from a customer's point of view etc.). In addition, please describe basic conditions, which are relevant concerning realization of your idea (e.g. values and standards, legal conditions, admission requirements etc.).					
Management & Team (background / experience in short description, corporate shares)					
Describe your team and, if applicable, functions of each team member and explain, which experiences they have with regard to realization of your business model (outstanding industry-experience, contacts with clients, technology-, Know-how-expert etc.).					
Success / Status					
What is your status quo? Which steps did you take until now, to realize your idea? Please describe shortly your recent status and list your achievements (are there already customers, revenue, deliverymen, partners etc.?)					
Financing plan: Sources of funds and allocation of funds (investments)					
What is your need of capital in order to realize your business idea the way you planned? How should it be financed (e.g. partly or fully financing through bank loans, investors, etc.). Describe shortly, for what exactly you want to use the capital. Explain the „Return on Investment“.					
INVEST – subsidy for Venture Capital (http://www.bafa.de/bafa/de/wirtschaftsfoerderung/invest/index.html)					
<input type="checkbox"/> Yes, I received a positive decision on public funding. <input type="checkbox"/> I already submitted the application form at BAFA. But I did not receive a decision yet. <input type="checkbox"/> No, I did not submit an application form at BAFA until now.					
Financial data	2014	2015	2016	2017	2018
Revenue					
EBIT					
Employees (number)					
Need of capital					
Percentage of Business Angel capital from it					

Source [referenced: 09.06.2016]: <http://www.business-angels.de/start-ups/der-weg-zum-business-angel/>

Downloaded and translated from BAND's homepage.

Appendix 2. Comparison: Business Angel and Venture Capital.

	Business Angel	Venture Capital
Number of investors	1	Several investors backing a VC Corporation
Point of investment	Early stages: Start-up phase	Expansion stages
Extent of investment	Capital and Know-how	Capital (and sometimes Know-how)
Readiness to assume risk	High – extremely high	High
Amount of investment	Relatively Small	Very High
Possibility of an additional investment	No (but may have further investor contacts available)	Yes (subsequent investments possible)
Participation agreement	Yes	Yes
Influence on the Management	Low	High
Right of co determination	Guaranteed	Guaranteed
Purpose of investment	(Non-) monetary purpose: e.g. support of friends/family	Monetary purpose: mainly interested in profits

Based on: Hahn, C. 2014. Finanzierung und Besteuerung von Start-up-Unternehmen. Page 58.

Appendix 3. Selection of public funding programs in Germany.

Institution	Program	Type of funding	Conditions
KfW	ERP Start-up loan – StartGeld	100.000€	Purpose: financing of nearly every project Duration: 5 – 10 years Low interest yield: fixed over duration 2 years without repayment (just interest yield) No equity needed
KfW	ERP Capital for Start-ups	500.000€	Purpose: paving way for further debt financing Duration: 15 years First ten years: subsidized interest yield Subordinated loan up to 40% Minimum equity of 10-15%
KfW	ERP Start-up loan - Universal	Up to 25 mio €	Purpose: to establish/ takeover an enterprise Duration: up to 20 years Low interest yield: fixed for 10 years 1-3 years without repayment(just interest yield) no equity needed, but collateral
KfW	ERP Start-up Fund	Equity participation	Purpose: strenghten equity basis Co-Investment of lead investor + KfW Participation in the investee company up to 50% of investment sum Foreign lead investor needed
BMWi	Mikromezzanine-fonds Germany	Participation up to 50.000€	Purpose: Realizing Business Starts Duration: 10 years 8% interest yield, 1,5% participation on profits first repayment after 7 years, stable rates
BMWi	INVEST-Subsidy for venture capital	Investor's shares will be funded	Purpose: supporting young innovative companies in search for an investor Start-up will obtain an "eligibility certificate" from BMWi to raise attention for investors

Minimum investment of 10.000€

BMW i	German Accelerator	3-month mentoring program	Selected German tech Start-ups will be supported to connect to the world's leading high tech region: Sillicon Valley
BMW i	High-Tech Gründerfonds	Venture Capital Investment	Condition: Start-up must be settled in high-tech industry
BMW i	My mikro-loan	Up to 20.000€	Purpose: funding of Business Start Several smaller loans can be granted Interest yield: 9,9% 100€ closing fee

Sources [referenced: 09.06.2016]:

Homepage KfW:

- <https://www.kfw.de/inlandsfoerderung/Unternehmen/Gründen-Erweitern/index-2.html>

Homepage BMWi:

- <http://www.existenzgruender.de/EN/Die-ersten-Schritte/Finanzierung/inhalt.html>
- <http://www.existenzgruender.de/DE/Weg-in-die-Selbstaendigkeit/Finanzierung/Foerderprogramme/Wichtige-Foerderprogramme/inhalt.html>

Appendix 4. Leading Crowdinvesting platforms in Germany and corresponding characteristics by 01.02.2016.

	Companisto	Seedmatch	Innovestment	Fundsters	Bergfürst
Foundation	2012	2011	2011	2012	2012
Supported projects	Start-ups Real Estates	Start-ups	Start-ups	Start-ups	Start-ups Real Estates
Platform users	>40.000	44.702	6.100	4.297	11.000
No. of Projects funded	41	85	29	10	n.n.
Invested capital	>22.000.000€	25.669.250€	2.500.000€	994,980€	3.841.320€
Market share 30.09.2015	49%	37%	~2%	~2%	~4%
Minimum investment	-	250€	-	-	10€
Type of participation	Profit-participating, subordinated loan	Profit-participating, subordinated loan	Profit-participating, subordinated loan	Silent Partnership	Profit-participating, subordinated loan

Sources [referenced: 09.06.2016]:

Platform homepages:

- <https://www.companisto.com/en>
- <https://www.seedmatch.de/#>
- <https://de.bergfuerst.com/>
- <https://www.fundsters.de/>
- <https://www.innovestment.de/>

Study German foundation organization:

- https://www.fuer-gruender.de/fileadmin/mediapool/Unsere_Studien/Crowdfinanzierung_9M_2015_Fuer-Gruender.de_Dentons.pdf

Appendix 5. Survey (Quantitative Research).

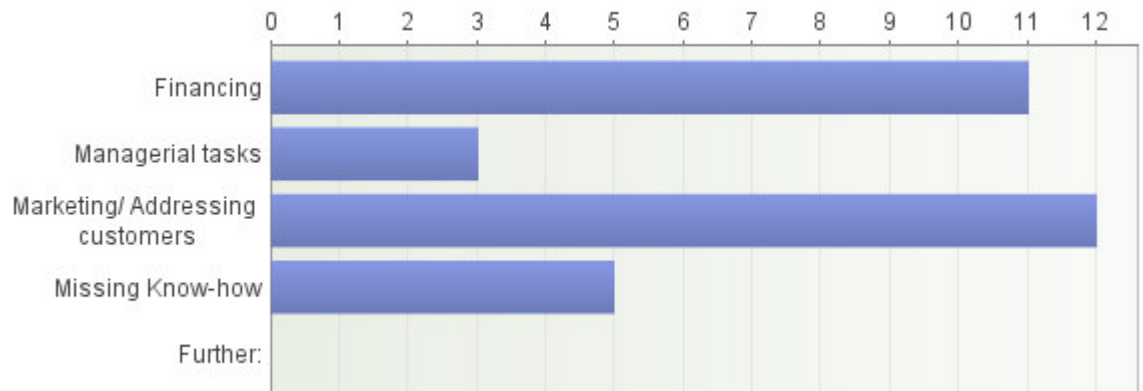
1. In order to assess your answers, please add here some general information on your Business and on your own person.

Number of respondents: 13

Foundation (year)	Area of the Business (e.g. E-Commerce)	Business idea (e.g. Smartphone Application)	Number of employees	Turnover	Sex (m/f)	Position/ function within the Business	Age
2014	Online retailer	delicate food	12	150000	female	sales manager	25
2013	food	chocolate candies	8	900.000	f	CEO	29
2013	e-commerce secondary market	online marketplace	5	500.000	male	business development	29
2013	beauty products	customized fragrances	25	1000000	female	marketing & PR	32
2015	accessories	eyewear	12	120.000	male	Founder's team	35
2015	Fitness	Individual Personal Training	4	300.000	F	Co-Founder	23
2015	Smartphone Repair Service	Smartphone Repair Service	30	200000	m	Head of Business Development	24
2015	Trading	Care products for men	3	35000	m	CEO	27
2015	Fintech	Smartphone Application that automates saving	9	-	m	Working student	26
2014	Food	Snacks for work	5	150000	M	Member of founders	37
2014	FashionTec	Order App	10	200k	m	CEO	46
2012	e-commerce	local online marketplace	7		m	CEO	38
2015	E-Business	software to organize bus travelling	4	75000	male	CEO	28

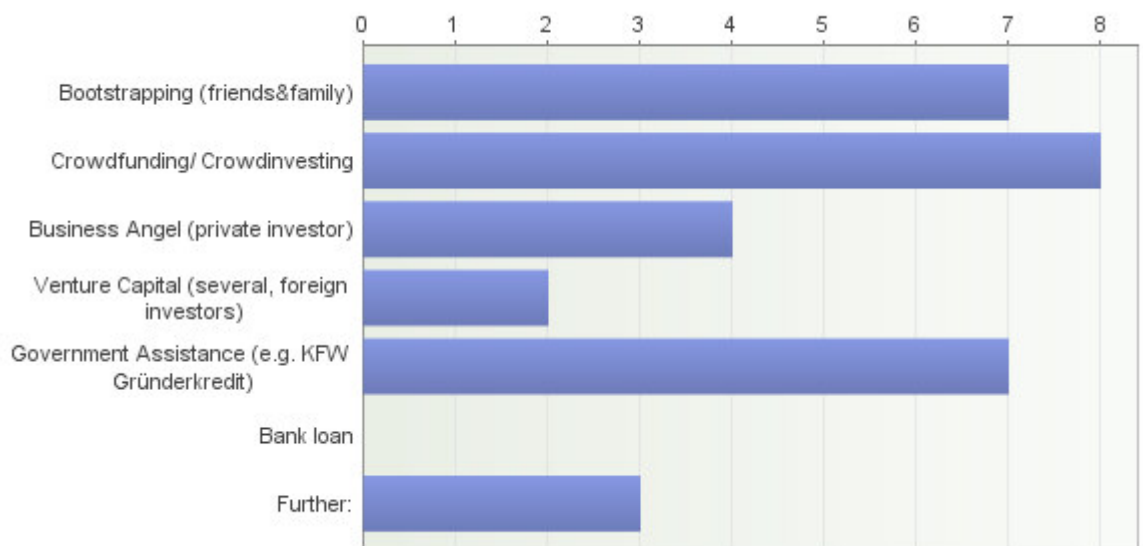
2. What kind of challenges did you face when setting the Business?

Number of respondents: 13



3. Which of the following financing methods did you take into consideration during seed-stages of your Business?

Number of respondents: 13



Open text answers: Further:

- We are still in the seed phase/ self financed from each of the three founders
- Private equity
- financial savings of our founders

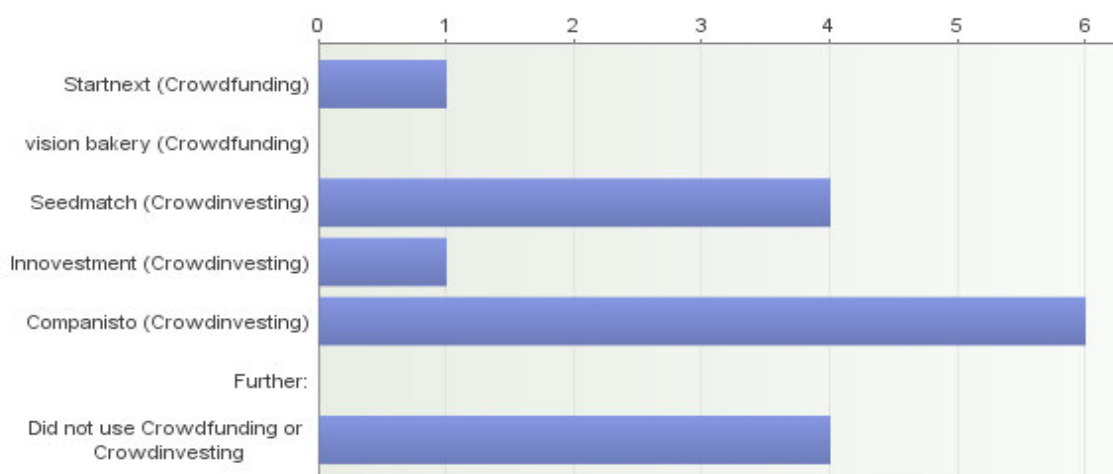
4. Please add the percentage of each financing compared to the whole volume of funding. (All together must be 100%).

Number of respondents: 13

	0%	25%	50%	75%	100%		Total	Average
Bootstrapping (friends&family)	7	6	0	0	0	Bootstrapping (friends&family)	13	1.46
Crowdfunding/ Crowdinvesting	5	1	6	1	0	Crowdfunding/ Crowdinvesting	13	2.23
Business Angel (private investor)	8	2	0	2	1	Business Angel (private investor)	13	1.92
Venture Capital (several, foreign investors)	12	0	1	0	0	Venture Capital (several, foreign investors)	13	1.15
Government Assistance (e.g. KFW Gründerkredit)	6	3	4	0	0	Government Assistance (e.g. KFW Gründerkredit)	13	1.85
Bank loan	13	0	0	0	0	Bank loan	13	1
Further (as defined in question no. 3)	10	2	0	0	1	Further (as defined in question no. 3)	13	1.46
Total	61	14	11	3	2		91	1.58

5. In case you used Crowdfunding or Crowdinvesting: On which of the following platforms did you publish your Business idea/ where did you search for investors?

Number of respondents: 13



6. Familiarity with the term of Crowdfunding.

Number of respondents: 13

- Collecting money from "the people" via an online platform that transmits your idea to potential small and mini investors who will receive some perks in advance, depending on the invested amount.
- asking private investors on the internet to invest in the company without getting actual equity
- Gathering money on Platforms like Kickstarter or Indiegogo for sexy lifestyle projects.
- Crowdfunding gives great ideas a possibility to become real. Financially crowdfunding is one of the most expensive solution, but sometimes the only one a startup has.
- Crowdfunding allows private persons and also cooperations to invest into business ideas / personal dreams etc.
Person can donate an individual amount of money for the project in order to support it. A common crowdfunding in Germany, which I am familiar with is meingrunder, which is a very cool idea!
- funding a project or venture by raising many small amounts of money from a large amount of people
- possibility to promote the product online and collect money by aid of several smaller investors
- several smaller investors reaching the financing target
- huge amount of investors (contributing only smaller parts)
- financial volume needed to realize an investment is granted by several smaller investors
- Reward-based crowdfunding (non monetary)
- presenting a business idea online + getting financial support of those persons who are attracted
- financing a project with many smaller parts.

7. Familiarity with the term of Crowdinvesting.

Number of respondents: 12

- Collecting money from "the people" via an online platform that transmits your idea to potential small and mini investors who will get a Share of your business.
- asking private investors on the internet to invest in the company by getting actual equity
- Investing into early stage startups with small amounts of money.
- same question?!
- I guess crowdinvesting is similar to crowdfunding, but the 'investor' expects a certain ROI after a specific period of time. Also, investors can be both, privates or corporates. The aim is to make the business idea public and to reach a wider range.
To my mind, CI is also useful to receive a first feedback on the own business idea - in case people like to invest, they believe in my idea.
- only start-up financing
- same but only with start ups
- profit participation for the investors
- focus on profit
- Equity-based crowdfunding
- -
- -

8. Do you think Crowdfunding (further: Crowdfunding) depicts a way to test the market's reaction towards your planned product/service? (E.g. amount of people investing money can show a tendency concerning necessity of and desire on your product/service).

Number of respondents: 13



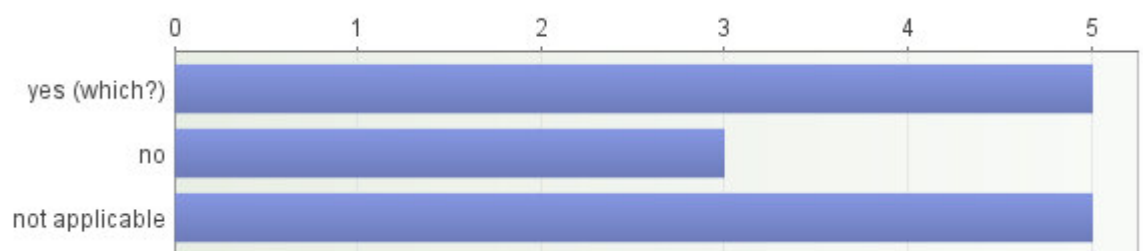
9. Do you think Crowdfunding (further: Crowdfunding) can raise attention on your Business, due to its innovational character? (A new and attractive form of financing).

Number of respondents: 13



10. Did Crowdfunding (further: Crowdfunding) have an additional marketing effect on your Business?

Number of respondents: 13



Open text answers: yes (which?)

- for b2c you can generate directly interest & customers
- promoting of our business idea in corresponding media. Raising attention for clients
- attracting customers
- made our business idea more popular, since it is based on the internet/ customers who are shopping online
- making our products more popular (new clients after the investment period)

Crowdfunding: High amount of small investments of private persons. All investments together are realizing a business-foundation/ movie/ social project/ etc. In return the investor is given intangible assets, such as being named in a movie-trailer or getting an invitation to an exclusive reading. Crowdinvesting: Same principle as Crowdfunding, but financial return for investors. E.g. getting shares on the business and participation on profit/loss.

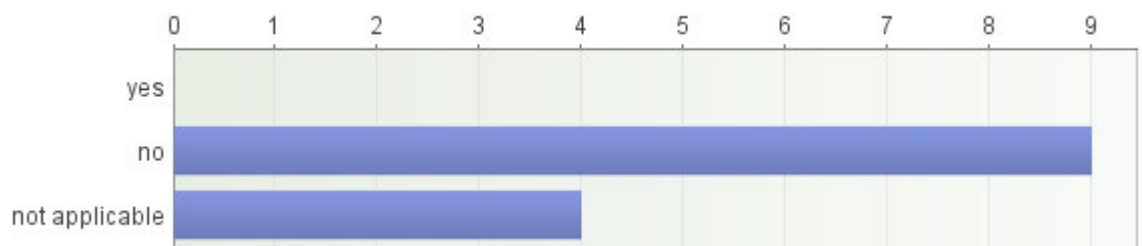
11. From your point of view: Which persons will be addressed most through Crowdinvesting (further: Crowdfunding)?

Number of respondents: 13

- People who are interested in new business ideas but don't have the possibility of investing a relevant amount all alone
- possible customers, if your business is targeting people in the crowd
- Early adopters, those people who browse on platforms like Kickstarter or indiegogo
- is a huge mix from the normal student to VCs
- I guess business Angels and specialists in the areas (e.g. FinTech) but also peers of the prospective product.
- private and business people who are interested in product innovations
- persons, who are interested in the product. Young people, who are aware of crowdinvesting.
- people who are familiar with crowdinvesting and got the financial means
- side of companies: collecting money in an uncomplicated way. Complement to other forms of financing.
- side of investors: private persons, who are interested in the product and who are registered at a platform
- innovational business ideas
- people who are familiar with crowdinvesting (crowdfunding)
- young start-ups that have financial problems to solve.
- innovative personalities who are enthusiastic about new business ideas
- Only people who want money

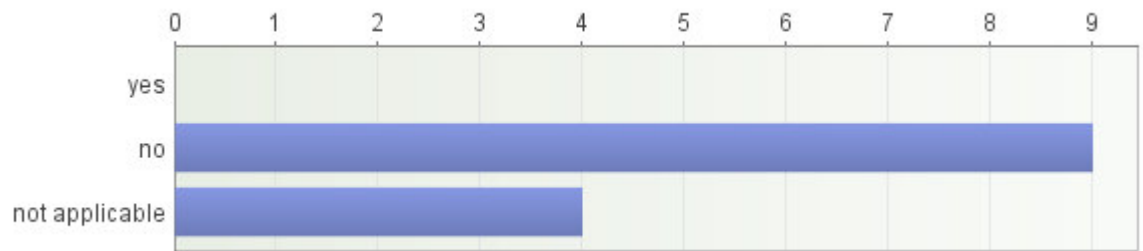
12. Did you apply for a Crowdinvesting (further: Crowdfunding) platform, but your Business idea was not chosen for publication?

Number of respondents: 13



13. Did somebody use your Business idea for his own, after you published it on a Crowdfunding (further: Crowdfunding) platform?

Number of respondents: 13



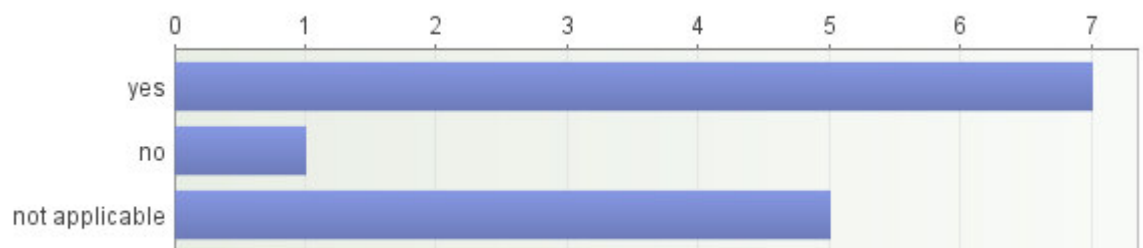
14. Why did you choose your specific platform? (e.g. reputation, number of investors)

Number of respondents: 13

- -
- reputation
- good support
- kind of high end crowdfunding
- We decided not to go for crowdfunding because we don't only need money. We need money, know how and access to networks.
- seedmatch looked most professional and the kind of startups which was funded fits more or less (funding sum) to our project
- N.a.
- -
- popularity
- reputation
- was recommended to us by friends
- biggest amount of investors
- It was recommended to us to apply at different platforms. We chose the 2 biggest and one smaller (see preceding page).
- one of the two largest platforms here in Germany (Companisto)
- not applicable

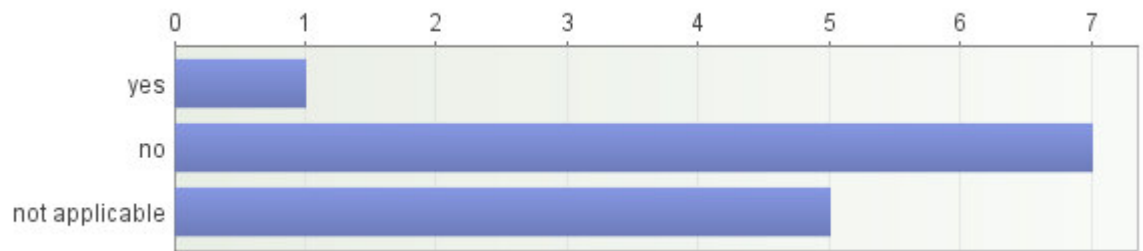
15. Did you reach your financing target with your first attempt?

Number of respondents: 13



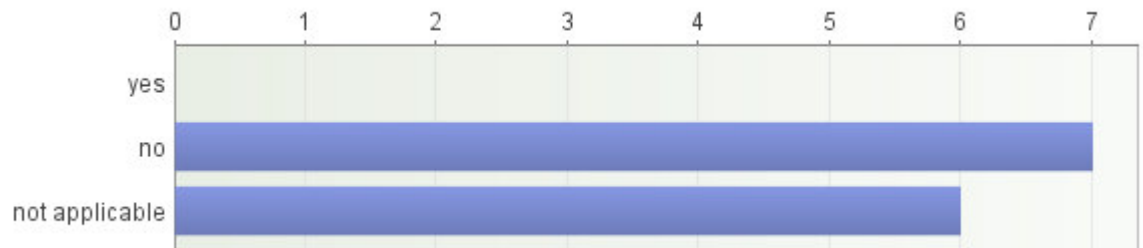
16. Did you publish your Business idea on several Crowdinvesting (further: Crowdfunding) platforms?

Number of respondents: 13



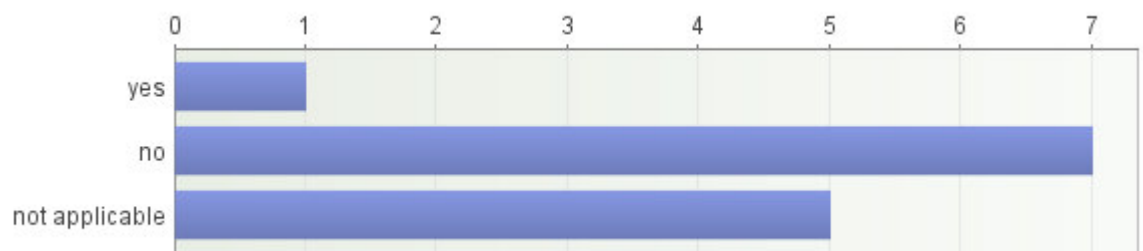
17. Did of your investors expect different benefit from his investment than you could offer to him?

Number of respondents: 13



18. Did legal requirements impede/ influence your process of Crowdinvesting (further: Crowdfunding)? (E.g. Maximum amount of money that is allowed to be financed)

Number of respondents: 13



19. Why did you use Crowdfunding (or Crowdfunding)?

Number of respondents: 13

-
- Freiheit, das Unternehmen im eigenen Sinne zu entwickeln da kein Mitspracherecht
Crowd als Partner kommt gut an bei unseren Kunden (im Gegensatz zu VC oder Konzerne)
- We didnt.
- Crowdfunding was 1 of 3 investments and the 2 others works only if Crowdfunding was a success. A kind of proof of concept
- N.a.
-
- to collect money in an easy way
promoting our business
- no contacts with business angels
- because we only needed capital, no know-how. We already had the software engineers.
- We only needed capital, weren't looking for knowledge.
Difficult access to further/different types of financing.
- Primarily: To improve our financial situation. But also to make our business more popular...
- To collect capital (easy way to raise capital). But no support in managerial tasks/ supply of relevant know-how!
- we did not use it. For us, only programming was important and that is why we renounced crowdfunding.

20. Further comments/ thoughts you would like to add:

Number of respondents: 8

- We didn't use crowd investing/ funding
- Crowdfunding is a great chance to realize your idea. Important is the Investmentstory, the movie and the gift you choose as present for higher investments.
- I guess the idea of crowdfunding/-investing is interesting for both sides - the founder gets feedback and money and the investor can invest in alternative ideas.

Add-on Deutsch: den Investoren (privat) Word eine Alternative anlagemöglichkeit zur klassischen Aktie/Immobilie etc geboten, bei der der ROI um einiges höher sein kann.
Leitzins = 0% aktuell usw.

Viel Erfolg!

-
- good luck!
-
- Viel Erfolg weiterhin!
- CI was very important to us. Because at that time, we hardly had chance to raise capital with different financing forms.

Thanks for participating! Please click submit button.

Source [referenced: 09.06.2016]: <https://report.webropol.com/reports/ViewReport.do?formId=8DF29D25-DABA-4BC8-93A7-015EAD29112E&reportId=0>

Exported from weropol.com.

Appendix 6. Interview (Qualitative Research).

Question one: Which forms of financing did Savedroid take into consideration during early stage development?

Hankir: *“At point of foundation in 2015 we solely used Bootstrapping, which means that each of the three founders was contributing parts of their own savings. We aimed to construct a prototype and to develop our idea towards marketability, including a detailed product concept. Afterwards, we searched for investors with the aid of our product-prototype and are now about to close our first external financing round, which represents seed-financing. Here, half of our financing target will be covered by a state development bank and other half by several private Business Angel investors.”*

Question two: Why did you decide not to use Crowdfunding?

Hankir: *“Basically, it is a fascinating type of financing that arose on the market. Especially for B-to-C start-ups it is interesting, because of ensuring an initial user base by aid if the Crowdfunders, who are assuring a product multiplier effect: An investor supporting the business idea will most likely be a user of the product in the future, but also promote the product within his friends, which is an important marketing effect. However, I am convinced to have identified two decisive aspects of Crowdfunding, which influence the potential of this type of financing and which were decisive concerning our decision to renounce it: On the one hand, most of start-ups initiating Crowdfunding are selling a physical product that is easy to understand from the Crowd's perspective. Here, also the kind of reward offered to the Crowdfunders is connected to the product, as, for example, a special discount or privileged delivery. In contrast: In case of a start-up enterprise that focuses on a virtual service, especially on a virtual financial service, it will be quite difficult to quickly get an impression of the business idea, which is important for the Crowd in order to ensure a successful funding. On the other hand, German risk mentality is limiting Crowdfunding's potential. Especially in comparison to the Anglo-Saxon area, investing money is handled more risk-averse. It also becomes obvious due to the fact that private investors are still not investing their money in stocks for instance, although interest rates are historically low and still decreasing at the moment. It implies that adventurous investments, such as Crowdfunding,*

are still depicting a niche market. This is main reason, why we decided not to use Crowdfunding. There is another smooth factor, but which is turning in the moment in my opinion. Two years ago, when I was talking to Venture Capital investors in the context of my first start-up, I often heard that Crowdfunding is more used by enterprises that did not find a solid type of financing. To be honest, I think this is a bit exaggerated, as this perspective is neglecting Crowdfunding's big marketing effect in the field of product multipliers and also presumes that Crowdfunders are playing the role of simple investors, who are not reflecting the business idea and product."

Interposed question: Did Crowdfunding's characteristic of mainly granting monetary support, but no supply of additional and business-related know-how, affect your decision regarding renouncing this type of financing? There could exist a connection with regard to your decision to use Business Angel financing.

Hankir: *"Well, we have a very interdisciplinary founding team. Our Chief Technology Officer (CTO) is IT development specialist since fifteen years and is covering all IT issues in our business. In contrast, I am more functioning on the business side having a business administration and economics background and being the CEO. Third member of the founding team is our Chief Operating Officer (COO), who is business data processing specialist and thus closing the gap between us. Basically, we were not depending on external know-how and could more or less develop our business with our own forces. The added value we have seen with Business Angel financing was networking. Because Business Angel investors have many contacts available and a certain reputation within the industry, we are in the position to benefit from them. For instance, getting intros with further business partners and investors for a future financing round was a decisive factor of motivation for using Business Angels. But also support regarding questions of business development. To return to the issue of Crowdfunding we have to say that it also has high networking benefits: Establishing a user base and getting feedback in order to improve the product also is a big advantage. But it is a different kind of know-how support that you are receiving. To sum up, Crowdfunding is more on the market testing side and promotion of the product, whereas Business Angels can enable a*

successful future development of the company. In an optimum way, both types are coming together.”

Question three: For what kind of company will Crowdfunding be attractive from your point of view?

Hankir: “Basically, start-up enterprises that have a relative small financing target and that are closely connected to the customer. Apart from the simplicity of the product and possibility to attract the crowd, networking effects are playing an important role. Particularly with regard to community effects, meaning that several customers are able to discuss their product experiences, Crowdfunding has advantages. At point of a successful financing round, the company is not only attracting hundreds or thousands of new clients, but also potential networking participants. It signifies high popularity of the product and could also attract other investors. Thus, networking effects are a big factor of motivation for Crowdfunding. Apart from that there are not many restrictions, as it is a tool that can be used by many entrepreneurs.”

Interposed question: Do you think the possibility to conduct market research can depict a decisive factor of motivation for a Crowdfunding process?

Hankir: “At the very beginning of a business and as a proof of concept it is quite dangerous, since a failed financing round will lead to a kind of dead end: After publishing name of the product and business idea, but not reaching the financing target, because of motivating too little number of Crowdfunders, it will be connected to a bad reputation and thus discourage further investors. Conducting market research has to be done before the issue of financing the project, because it is a relevant input to convince investors. Thus it can only be seen as a side-product of the financing round, but it should not be the main factor of motivation for a Crowdfunding process.”

Question four: How would you describe access-possibilities to traditional means of financing in general for start-up enterprises, such as Business Angels, Venture Capital, bank loans and public funding in Germany?

Hankir: *"Granting of a bank loan is illusory from a start-up's point of view, because of not having track records or collaterals yet. The business is simply too risky at this point of the business phase we are talking about. As most of start-up enterprises do not have namable insolvency assets available, granting debt capital will most likely not meet its actual meaning of being treated preferred in case of bankruptcy. In most of bankruptcy cases creditors will not be serviced, so the risk of investment failure is quite high for a bank during this stage of the business development. Regarding public funding possibilities in Germany we have to admit that there does exist a huge number of programs initiated by the government. Those, which are attractive also with regard to the funding sum, are normally connected to highly elaborate and bureaucratic application periods. For instance, EXIST Business Start-up Grant from the German Federal Ministry of Economics and Technology is characterized through very extensive application papers and first feedback after three months. When obtaining the feedback, founders are often confronted with supply of additional information on the business, in order to push the decision concerning granting money or not. From a start-up's point of view this is problematic, because of too much time that has to be invested beforehand and that can hardly be renounced, because of very fast business lifecycles. In addition, there remains an uncertainty regarding acceptance. In general, application processes are quite difficult and sometimes even call for an employment of external agencies, which is of course costly. Concerning Business Angels there are three ways to get in contact with: Either through personal contact, which is the most successful way, because of an existing bond of trust. Second way is to get personal intros from your network, which may still work in some cases. Another possibility is to impersonally contact Business Angels in a way of "cold calling". For instance, there does exist the Business Angels Network Germany, where you can apply for private investors. Problematic is that popular and well-known Business Angels are getting hundreds of applications per week, which makes it difficult to promote your own idea. Concerning Venture Capital we have to say that it can mainly be applied in later stages of your business, but not in the early stage. In other countries, as*

for example the United States there are also existing Venture Capitalists, who are investing during the early stage, but this is very unlikely in Germany. Here, investments are made in later stages, when the business is more matured and less risky, which goes along with risk aversion of German investors, as already mentioned in the beginning. To sum up, Venture Capital and bank loans are hardly to access for start-up enterprises and public funding is quite complicated. Business Angel investors are a very attractive form of financing for business start-ups, but are mainly depending on personal networks.”

Question five: Does Crowdfunding have the potential to enable further financing? For instance, first raising the equity basis and then applying for a bank loan?

Hankir: *“I would say this is a quite theoretical approach. We have to distinguish in reality, where it will depend on several factors. On the one hand, the financing sum raised by Crowdfunding will be important and also the fact how high your “cash burn” is, meaning how long the business can support its operations with this financial input. Furthermore, credit amount you are applying for will be decisive. Here, mainly the relation between equity and required sum of capital has to be well balanced. For instance, when applying for 300.000 EUR loan and only contributing the same amount in equity, a bank will most likely decide not to grant a loan. In addition, we have to take the phase of the business at point of application into consideration. As already explained before, a start-up’s business does not fit to bank loan requirements, because of risk evaluation.”*

Question six: How would you rank Crowdfunding’s future potential in Germany? Do you think it is more a temporary hype or will the market steadily grow? Which factors will influence its future role on the German financial market?

Hankir: *“I hope that it is going to be established as financing alternative in Germany, because of broaden a start-up’s horizon regarding early stage financing. At the moment, it is still a niche financing product and we will see how it will develop in the future. Its future potential will mainly depend on avoidance of strict regulations and on the number of platforms that are entering the market, which will increase Crowdfunding’s popularity. However, since the investment behavior of Germans will most likely not change in the next few years, inspiring the broad mass for*

Crowdfunding will be difficult. To be realistic, Crowdfunding will remain a niche financing product in the next years, but hopefully the niche is growing.“

Question seven: Will legal requirements change Crowdfunding's framing conditions in Germany in the future? For example: An implementation of additional regulatory laws and necessity of a securities prospectus requirement?

Hankir: *“Generally, it is hard to anticipate change of legal requirements. Of course, lightened up regulations will foster market growth of Crowdfunding in Germany, because of increasing attractiveness due to less bureaucratic issues. Regarding a securities prospectus requirement we have to admit that raising the financing limit up to 2.5 million EUR back in 2014 did increase attractiveness for start-ups and also make the financing process more save for investors. Contrary to beliefs that a higher financing volume could increase the risk of failure and loss of shares on the side of investors, I am convinced that especially highly risky companies, which are closely connected to foundation, will more and more be repressed. Practically, having a financing limit of 50.000 EUR will attract more businesses that are at the very beginning of operations and consequently highly risky. Having a higher limit implies that there are participating more matured business, which need higher amounts of capital and which signifies less risk for investors.“*

Interviewee: Dr. Yassin Hankir

Position: Founder and CEO of Savedroid (FinTech start-up from Frankfurt)

For further information: Please have a look at corresponding chapter 4.2.

Interview recorded in German and afterwards translated into English. Interviewee's statements were partly shortened.